



SATURDAY, DECEMBER 13, 1873.

Cutter Bar for Lathes.

This bar consists of two pieces of steel holding a movable bit which can be taken out and replaced by another, *ad infinitum*. The notch for holding the cutter should be roughened. The simplest method of doing this is to run a tap of suitable size through it when closed, cutting a screw thread in it. The very point of the jaw or cheek should be tempered brown. The rest of the bar is spring temper, a simply soft steel. It is made of two 4-in. slips of 7-8th and 5-32d steel. The slips of steel used as cutters should be slightly notched on the sides before tempering to prevent slipping. Thus treated and held in hard-screwed jaws, they are very firm and steady to their work.

Of course the same construction may be applied to lathes of any size, enlarging or reducing the size of the steel bar used. Fig. 1, elevation; Fig. 2, plan; Fig. 3, bolt; Fig. 4, cutter, $\frac{1}{8}$ in. long.

Our engraving is copied from the *English Mechanic*.

Argentine Railroads.

A report recently issued by Dr. Frias, the Minister of the Interior of the Argentine Republic, gives the following summary with regard to railroad and telegraph works in that country: "The Central Argentine railway, since it commenced running in 1867, has earned \$2,488,185, of which one-half was absorbed by working expenses. The balance paid by Government for the 7 per cent. guarantee has been \$1,182,932. In 1872 the net gains were 5½ per cent. on the capital, and it is expected that in 1874 the Government will have nothing to pay on the guarantee. Some Cordobese proprietors give much trouble by litigation and enormous demands for land expropriated by the line. Mr. Stuart's line to Rio Cuarto has been finished within the 37 months stipulated, terminating in November, 1873; the bridge and terminus, however, at Rio Cuarto will not be ready till next February. The East Argentine, in spite of the Jordan revolution, will open its first section to traffic from Concordia to Federación in October, and the whole line will be completed to Monte Caseros, in Corrientes, by the end of 1874. Some delay has been caused by difficulties in getting land expropriated. Messrs. Tellener & Co. are working at the narrow-gauge line from Cordoba to Tucuman, commenced last October, and which there is every probability of their completing by October, 1876. The Campana line, with guarantee on £400,000, was begun in October, and must be completed in two years or forfeit the guarantee. The Andine line, wide-gauge, will be prolonged from Rio Cuarto to Mercedes, on Allan and Elias's plans. (This is the line since contracted for by Messrs. Rogers & Thomas.) The narrow-gauge Cuyo lines are not yet awarded, but the governments of all the upper provinces have engaged to give the land necessary gratis. The railways of the republic are as follows: Actually working—Central Argentine, 246 miles; railways in Buenos Ayres, 352 miles; Andine to Rio Cuarto, 82 miles; total, 680 miles. In construction—Cordoba to Tucuman, 336 miles; Gualeguay line, 76 miles; East Argentine, 90 miles; Buenos Ayres to Campana, 48 miles; total, 550 miles. Projected and proposed for—Buenos Ayres, Mendoza and San Juan, 724 miles; Transandine to Chile, 160 miles; Totoralejos, Rioja, Catamarca, 440 miles; Tucuman, Jujuy, Salta, 220 miles; Corrientes to Mercedes, 138 miles; total, 1,682 miles. Grand total, 2,912 miles. Every one of the 14 provinces is now connected by telegraph, whereas in May, 1870, there was but one short line; no less than 1,166 miles have been completed in the last year. Mr. Carranza is making 250 miles in the north, and then we shall have close on 5,000 miles in the republic.

THE SCRAP HEAP.

Foreign Iron Prospects.

The *Moniteur des Interets Materiels*, of Brussels, whose opinions regarding finance and industry have great weight with us, says, under date of November 21: "The prices of iron are falling every day, and we call special attention to our Middlesborough correspondence, which brings us precise details which are not very encouraging. The situation of the English metal market, frankly speaking, is bad, and the future promises to be darker still. One of the greatest outlets of this industry is going to fail us almost completely. America for some time to come will do nothing more, or almost nothing, for its railroads. The weakness of manufacturing stocks is therefore natural." The Middlesborough correspondent said that sellers had reduced their price for rails to £10 10s. without finding buyers.

Improved Car Sill.

S. D. Beerbrower and Kirk Thompson have devised an improvement in car sills which, they claim, is much stronger and more durable than a wooden sill. Their sill is simply a hollow girder made of rolled iron plates, and about six inches square. The ends of the upright posts are let into the sill and extend through to the under side, to which they are securely fastened.

Locomotive Tests.

The Cumberland (Md.) *News* of November 12 says: "On Monday the pulling capacity of a Baldwin mogul engine was tested on the Cumberland and Pennsylvania Railroad. It started 28 loaded hoppers, and then drew 24 from Jackson to Frostburg in one hour and twelve minutes. Some time previous to this trial a Millholland engine was tested in like manner over the same piece of road. It drew 28 loaded hoppers from Jackson to Frostburg in one hour and twenty-four minutes. Difference of load in favor of the Millholland, and difference of time in favor of the Baldwin. Mr. W. L. Jordan, Master Mechanic of the Cumberland and Pennsylvania Railroad, and Mr. Thomas Malloy, Supervisor, witnessed Monday's test. Mr. J. B. Reagan was the engineer."

Railroad Manufacturers.

The Connellville Car & Machine Shop Company has moved into its new shops at Connellville, Pa. The shops are full of work and the company has a full force of men employed.

Contributions.

Interchange of Cars—More Line Cars Wanted.

TO THE EDITOR OF THE RAILROAD GAZETTE:

Your issue of November 29 has a very just article about interchange of cars. The remedy I should propose is to build more "line cars." All east and west roads should have at least one-fourth of their stock "line cars" in such lines as the Red, Blue, Globe and Erie & North Shore. We can't collect demurrage. A delivers the car to B on the 3d; B receives the car on the 5th; B delivers the car to C on the 8th, and C receives it from B on the 10th; that is about the way 50 per cent. of the interchange is made. Cars should be returned promptly. The great neglect of this is that agents at small stations do not know where to send the cars. To obviate this as much as possible, the Rock Island road has had a large circular printed, showing what road delivered to and what station to load for, which is found to be a great help to agents.

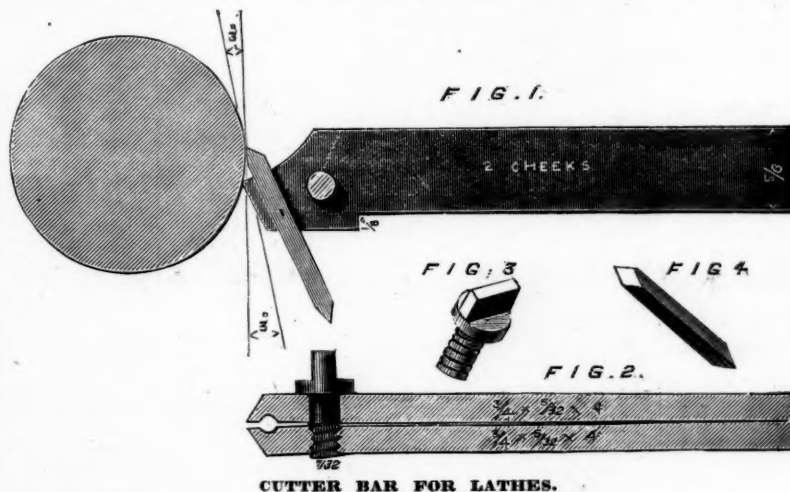
OCCASIONAL.

How they Repair Track in a Chicago Yard and in some Other Places—Rerailment in the Yard.

TO THE EDITOR OF THE RAILROAD GAZETTE:

An engine had been off the track at a misplaced switch, and the rods were fearfully bent, so much so as to narrow the gauge of the switch nearly an inch. This rendered the wheel flanges exceedingly liable to "mount" the end of the switch-rail and cause a "run-off." The trackmen sought to remedy this by straightening the switch-rods, or, rather, by attempting to straighten them.

A man threw down a block of wood for a "bait," and with a heavy bar raised the switch, the bend in the rod resting on the bar. Another man, with a sledge, commenced a furious pounding on the rail at the end of the switch-rod, the only visible effect of which was to greatly disturb the man who was sitting on the end of the bar, holding up the switch. But cold



CUTTER BAR FOR LATHES.

iron is about as obstinate as some of the men that handle it are stupid, and the rod refused to yield to the persuasive blows of the sledge. After a season of pounding and blowing, with a liberal mixture of profanity, another plan was resorted to. A rod was slipped off at the ends of the switch-rails and placed bottom upward on a rail lengthwise, the rail serving as an anvil. Another performance with the sledge, with different results. The rod would not lay still, and the united efforts of three men could not hold it in place, a blow from the sledge causing it to bound like a thing of life. As the rod was placed with the "elbow" upward, it of course rested on the end or clasp, and the clasp being thin, the effect of the first blow was to nearly close it up. The next blow began to tell on the kink in the rod, and pretty soon it was pronounced "good enough." It was now concluded to slip it back to place, but the straightening process had made it longer than its fellows that had not been pounded, and the next move was to force the rails apart with bars; but when this was done another difficulty presented itself. The closing up of the clasp aforementioned prevented its going upon the rail. The rod was again placed upon the rail (where it was straightened) edge up. A spike was used as a wedge to spread the clasp, which duty it performed in a manner entirely satisfactory, with the exception that it broke the rod at the turn on the end which forms the clasp. The engineman of the pony now appeared on the scene, and in language not to be mistaken insisted on an immediate passage of the switch. The switch-rails were then put in place and spiked, and as the switch was in constant use, a man was detailed to attend it with a claw-bar and hammer, while others "toted" the rod off to the shop (wherever that was) to have the thing done up right.

It is better to have an extra set of switch-rods on hand to use in such cases than to be bothered in such a manner. And what is better still is to protect the rods so that they will not be injured by any amount of run-offs. This can be done by placing a tie under each rod, and cutting a groove lengthwise through the tie on its surface large enough for the rod to move in freely without rubbing. A light sprinkling of salt in the groove will keep it clear of snow and ice. It is a good plan to put a little salt (a very little) on the headblocks, in the frogs, and back of the guard rails. It will effectually prevent mischief from snow and ice.

But perhaps the best plan of all for protecting switch-rods

is the one recommended in the RAILROAD GAZETTE some time since, viz.: by placing a tie each side of the rod, allowing just room enough for the end of the rod to move freely between them. In a crowded yard it is impossible for even the most careful of yardmen to avoid an occasional "run-off," and much of the delay and vexation occasioned by these mishaps may be obviated by always being prepared for such emergencies. Not only to prevent a needless smashing of things generally, but to provide for a ready "rerailment" of engine or cars, and to facilitate the putting to rights of whatever may be deranged, without delay. A slight mishap in the yard frequently knocks an outgoing train out of time, which may end in a collision far out on the line. If the managers will not provide some of the safety switches, it is a matter of economy to have a pair of the portable frogs lying about the yard—not lying around loose, but always in their places. These are not expensive, and a few minutes' use of them will replace an engine or car in time to allow of the regular departure of trains, and regularity is indispensable to safety. And, if economy is practiced to such an extent as to exclude any or all of the above-mentioned appliances for safety and convenience, the trackmen in the yard can do a good thing by providing a few pieces of short, narrow planks, and about a quarter of a cord of blocks of wood from 12 to 18 inches in length. Some shapely blocks from the tender will do, but where none but coal-burners are used, two or three hard-wood planks, sawed to proper lengths and piled up snugly among the switches, will be found exceedingly useful in rerailing an engine.

It may seem superfluous to explain the manner of using short-wood or blocks in getting the locomotive on the track, but, judging from what recently came under my notice, it is (on some roads) one of the lost arts, and will bear explanation. It is not when a locomotive is in the ditch, bottom up, that the wood would come so handy, but when she stands on her feet and is only "comfortably off" there is nothing superior to it for the purpose in question.

The first move is to place some planks or scantling lengthwise of the machine and about a foot from the wheels. Then lay the pieces of planks or blocks with one end resting on the longitudinal pieces and the other on the gravel, or some blocks well placed for a better foundation. The object is to raise the wheels, and move them toward the track at the same time. This will be accomplished by backing her (if she went off head first) upon the blocks, which lay crosswise and at an angle of 25 or 30 degrees with the horizon. Supposing she went off to the right, the blocks on both sides must pitch to the left, or toward the track. The blocks for raising the wheels on the left side will of course be placed under the engine pitching outward, or toward the rail; those for the right side will pitch inward, or in the same direction. The blocking should be so placed as to raise the wheels gradually as the engine is backed, and not blocked too "dead" on the start. The wheels on the left side will only require raising so that the tread will catch the rail; while those on the right must be raised so that the flanges will clear the rail on that side. Therefore the lower end of the

blocking on the left side should be a trifle lower than the top of the rail; that on the other enough higher to carry the flange over. When both sides are ready she should be backed just far enough to get the wheels out of their bed, and a man should be stationed on each side to block the wheels when she has gone far enough. The engineman will find it difficult to stop just right, and it is necessary to block the wheels to insure success. Now fill up the spaces where the wheels were, and if your blocking is properly arranged the next move puts her on the track. The use of jack-screws may be necessary under some circumstances, but they are often used when the job could be done more readily without them. The road is often locked for hours, when a few minutes of the right kind of work would put things to rights. And it is as necessary to have the proper appliances in the yard for replacing engines and cars as it is to provide a thoroughly equipped wrecking car for work "outside."

WM. S. HUNTINGTON.

Interchange of Cars—Some Experiences.

QUINCY, December 2, 1873.

TO THE EDITOR OF THE RAILROAD GAZETTE:

In the GAZETTE of November 29 an article upon "Interchange of Cars" attracted my attention, and as I am one of those miserable sinners commonly called "car clerks," I am particularly interested in at least part of the subject. Cannot there be some way devised whereby cars can be returned—at least a majority of the times—to the same point and by the same route that they went out on? Several roads, with partial success, use large cards, which are tacked on the car, stating to which station the car is to be returned, but this does not always bring the car home, even if the card is not torn off or mutilated, which is often the case.

One source of detention of cars which I have often noticed occurs at the termini of roads where cars are exchanged, and is frequently caused by the rivalry, or possibly the spite, existing between the men whose duty it is to inspect them. For instance, a car from the "A. B." arrives at "C." and is billed to a point on the "E. F." Railroad. The inspector of the "A. B." pronounces the car fit to proceed, but when it is made up into the "C. D." train it is condemned by the inspector of the "C. D." road and, amid much profanity on the part of train-

men and switchmen, the car is "held," or, in other words, taken out of the train and put in some out-of-the-way place, frequently to remain until a tracer from the "E. F." road is sent after it.

It is very plain that this should not be so, but that it is so I have almost daily evidence. If such things come to the ears of superiors, each "boss" stands up for his own inspector, and instead of an amicable adjustment the breach is often widened. I have sometimes thought that the chief recommendation a person needed to become a prime car inspector was stubbornness.

Awards of Premiums for Machinery by the American Institute.

In the forty-second annual fair of the American Institute (1873) the following premiums were awarded in Department V.:

Wm. D. Russell, agent, No. 18 Park place, New York, for the best steam engine (Baxter), silver medal.
Delamater Iron Works, foot of West Thirteenth street, New York, for the best Ryder cut-off steam engine, silver medal.
Jerome Wheelock, Worcester, Mass., for the best variable cut-off steam engine, silver medal.
Hampson Whitehill & Co., No. 38 Cortlandt street, New York, for a horizontal slide-valve hand cut-off steam engine, bronze medal.
A. Kipp, Jr. & Co., Sing Sing, N. Y., for an upright engine, diploma.
Sewing Machine Engine Co., No. 841 Broadway, New York, for the best steam motor for sewing machines, silver medal.
Delamater Iron Works, foot of West Thirteenth street, New York, for the best hoisting machine, silver medal.
Wm. D. Andrews & Bro., No. 414 Water street, New York, for a hoisting machine, bronze medal.
McMann & Russell, No. 56 Gold street, New York, for valves, bronze medal.
Frederick M. Piret, No. 29 Broadway, New York, for the best heliocoil principle lubricating box, silver medal.
Thomas Prosser & Sons, No. 15 Gold street, New York, for the best weighing machine and dynamometer, silver medal.
Jewell & Steele, Brooklyn, L. I., for a high-pressure alarm, bronze medal.
Jewell & Steele, Brooklyn, L. I., for a low-water indicator, bronze medal.
J. B. Christoffel, No. 20 Lawton street, Brooklyn, L. I., for an elliptic spring boiler-tube cleaner, bronze medal.
Burleigh Rock Drill Co., for the best air-compressor, silver medal.
Jerome Wheelock, Worcester, Mass., for the best steam cylinder packing, silver medal.

GROUP 2.

Isaac H. Sherman, No. 45 Courtlandt street, New York, for the best bucket plunger steam pump, silver medal.
Wm. D. Baxter, South Bergen, N. S., for a double cylinder anti-freezing pump, bronze medal.
E. T. Jenkins, Jr., Brooklyn, E. D., L. I., for an improved siphon, bronze medal.
W. S. Blunt, No. 77 Beekman street, New York, for People's force pump, bronze medal.
The Glass-Lined Iron Pipe Co. of the State of New York, No. 317 Broadway, New York, for the best glass-lined iron pipe, silver medal.
Wm. L. Chase & Co., No. 93 Liberty street, New York, for the best "Little Giant" injector, silver medal.
John B. Haines, No. 1,482 Third avenue, New York, for a garden pump, bronze medal.
Erwin Fairbanks, Baldwinville, N. Y., for a centrifugal elevator, bronze medal.
C. Henry Hall & Co., No. 20 Courtlandt street, New York, for a pulsometer, bronze medal.
Wm. Burdon, No. 199 Washington street, Brooklyn, L. I., steam pressure and vacuum pumps, bronze medal.
Eagle Meter Co., No. 47 Gold street, New York, for the best water meter, silver medal.

GROUP 3.

C. Van Haagen & Co., Philadelphia, Pa., for the best rotary shaper, silver medal, and also silver medal for the best self-feeding hand drill, for the best horizontal drill attachment, for the best friction planer, and for the best friction gears, expansion boring tools, and slide-rest for lathes.
Biddle Manufacturing Co., No. 102 Chambers street, New York, for a combined press and shear, punching press, drill press and shears for round and plate iron, diploma.
Isaac H. Sherman, No. 45 Courtlandt street, New York, for a radial drill press, diploma.
Worcester & Hunt, Worcester, Mass., for a self-feeding upright drill, diploma.
Reuben Brady, Bank and Greenwich streets, New York, for a double-acting lever press, diploma.
W. L. Chase & Co., No. 93 Liberty street, New York, for the best emery wheels and machinery, silver medal.
J. F. Rogers & Co., No. 91 Liberty street, New York, for emery wheels, emery machinery and emery goods, diploma.
Scovill D. Root, No. 112 Chambers street, New York, for ground Turkey emery, diploma.
F. K. Sibley & Co., Waltham, Mass., for emery and crocus cloth, diploma.
S. C. Forsaith & Co., Manchester, N. H., for the best power spring hammer, silver medal.
Charles Merrill & Sons, No. 556 Grand street, for drop hammers, bronze medal.
Bradley Manufacturing Co., Syracuse, N. Y., for a cushioned hammer, bronze medal.
Thomas & Co., No. 560 West Thirty-fourth street, New York, for duplex slide lathes, bronze medal.
W. L. Chase & Co., No. 93 Liberty street, New York, for a foot-power lathe, diploma.
Amos H. Brainard, Hyde Park, Mass., for the best milling machine, silver medal.
S. S. Townsend, No. 31 Liberty street, New York, for a force blast and rotary blower, bronze medal.
Biddle Manufacturing Co., No. 102 Chambers street, New York, for lead traps and nippers, bronze medal.
Boyd & Chase, One hundred and seventh street and First avenue, New York, for oil stones, bronze medal.
Wiley & Russell, Greenfield, Mass., for a bolt cutter, set-screw machine and machine drill combined, bronze medal.
Stephens Patent Vise Co., No. 91 Liberty street, New York, for a parallel vise, bronze medal.
Dwight Roberts, Williamsburgh, L. I., for a lathe chuck, diploma.
Wm. Tunstall, No. 147 Union avenue, Brooklyn, L. I., for a saw-setting machine and an adjustable wrench, diploma.
James Gorton, No. 209 East Eighty-third street, New York, for a machine for bending sheet metal in forms, diploma.
Blings & Spence Co., Hartford, Ct., for drop and hammer forgings, diploma.
John Bayless, No. 157 East Fifty-fourth street, New York, for a vertical hot blast and water turrey and forge, diploma.
Jerome Wheelock, Worcester, Mass., for a cylinder boring apparatus, diploma.
Wm. P. Kellogg & Co., No. 118 Chambers street, New York, for a fan blowing portable forger, diploma.

Boyd & Pease, No. 524 East Eighteenth street, New York, for foundry facings, diploma.

GROUP 4.

First & Prybil, No. 461 West Fortieth street, New York, for the best band sawing machine, silver medal.
R. H. Plass & Co., Nos. 202 and 204 East Twenty-ninth street, New York, for band sawing machine, bronze medal.
George Harvey, No. 23 Ferry street, New York, for band sawing machine, diploma.
Henry L. Beach, No. 90 Fulton street, for the best scroll sawing machine, silver medal.
Walker Bros., Minneapolis, Minn., for scroll sawing machine, bronze medal.
Jerome S. Maseley, Syracuse, N. Y., for scroll sawing machine, diploma.
Reuben McChesney, Iliou, N. Y., for truss-arm scroll saw, diploma.
Trump Bros., Wilmington, Del., for scroll saw, diploma.
W. F. & J. Barnes, Rockford, Ill., for scroll saws, diploma.
C. V. Littlepage & Co., No. 321 East Twenty-second street, New York, for a planing saw, bronze medal.
Lane Manufacturing Co., Montpelier, Vt., for the best double circular saw-mill and set of clashboard machinery, silver medal.
F. C. Candee & Co., No. 57 Liberty street, New York, for circular saw-mill, bronze medal.
Myron T. Boulton, Battle Creek, Mich., for the best carving, moulding, paneling and dovetailing machine, silver medal.
Seymour & Whitlock, Newark, N. J., for the best dovetailing machine, silver medal.
Q. S. Backus & Co., No. 82 Chambers street, New York, for bit braces and angular borer, diploma.
John T. Hawkins, No. 283 East Broadway, New York, for the best spool-blank and turned wood-box machine, silver medal.
Reuben McChesney, Iliou, N. Y., for a new method of joining wood, bronze medal.
David Milliken, No. 534 West Twentieth street, New York, for a kindling-wood chopper, bronze medal.

Transportation in Congress.

On the 3d, in the Senate:

Mr. Pratt, of Indiana, submitted a resolution instructing the Committee on the Judiciary to inquire whether Congress has constitutional authority to create corporations for constructing railroads or canals penetrating two or more States, and whether it has authority to regulate rates of railroad transportation over existing roads chartered by States which, by consolidation, have continuous lines running through two or more States.
Mr. Mitchell, of Oregon, introduced a bill granting the right of way to the Canyonville & Galeville Railroad, in Oregon.
Mr. Fenton, of New York, introduced a bill "to provide for the better protection of the Northern and Northwestern frontier and facilitate commerce between the States." Mr. Fenton's bill provides for a loan of \$8,000,000 in United States 10-50 4½ per cent. bonds, to be made by the United States Government to the State of New York, for the purpose of enlarging the aqueduct and one tier of locks on the Erie and Oswego canals to a capacity to pass vessels of war 25 feet in width and 200 in length, and merchant vessels of 600 tons burden, propelled by steam, wherever said canals are less than 52 feet wide upon the bottom. The bill also provides that after the payment of the debt for which the canal revenues are now constitutionally pledged, and after the canals are thus enlarged, their net revenue shall be paid into the Treasury of the United States until the proposed loan of \$8,000,000 is repaid. Bonds are to be issued upon the report of the Commissioners, as the work progresses, every three months.

On the 4th, in the Senate:

Mr. Boreman, of West Virginia, introduced a bill to complete the water highway from the James River to the Ohio, at the mouth of the Kanawha. Mr. Boreman's bill directs the Secretary of War to lay out, construct, enlarge and improve a water-way from tide water on the James River at Richmond, Va., to the Ohio River at the mouth of the Kanawha River in West Virginia, by way of the James River & Kanawha Canal, the James, Jackson, Greenbrier, New and Kanawha rivers by canal slack water sluices or open river navigation not less than 70 feet wide and 7 feet deep, with locks not less than 120 feet long and 20 feet wide, and with capacity for vessels of at least 280 tons burden. The States of Virginia and West Virginia are to convey to the United States their interest in the property or franchise of any corporation having a claim to the continuous line of water communication projected and in part completed by the State of Virginia, and the cost of the work is then to be defrayed by the issuance and sale of United States ten-fifty 4½ per cent. bonds to the amount of \$8,000,000. Provision is also made for the purchase by the Secretary of War of the private stock in the James River & Kanawha Company at a price not exceeding \$25 per share, and also for the appointment of commissioners to equip, maintain and manage said water-way when completed, one each to be appointed from the States of Pennsylvania, Wisconsin, Iowa, Missouri, Illinois, Indiana, Ohio, Kentucky and West Virginia.

The Senate Committee on Post Offices and Post Roads consists of Mr. Ramsey, Chairman; Messrs. Hamlin, Ferry of Michigan, Flanagan, Dorsey, Jones, Saulsbury, Merriman and Hamilton of Maryland.

The Senate Committee on Railroads consists of Mr. Stewart, Chairman; Messrs. Scott, West, Ramsey, Hitchcock, Cragin, Howe, Frelinghuysen, Hamilton of Texas, Ransom and Kelley.

The Senate Committee on Transportation Routes to the Seaboard consists of Mr. Windom, Chairman; Messrs. Sherman, Conkling, West, Conover, Mitchell, Norwood and Davis.

In the House on the 4th, the following bills and resolutions were introduced:
By Mr. Hawley, of Illinois, to regulate commerce among the several States by railroads; also for a canal connecting the waters of Lake Michigan and the Illinois, Mississippi and Rock Rivers.

By Mr. Wilson, of Indiana, declaring the true intent and meaning of the Pacific Railroad acts. It prohibits the approval by the President, or any Department, of a map presented by the Central Branch of the Union Pacific Railroad Company, for an extension of the road of that company from its present western terminus to the 100th meridian. Its object is to prevent this company from procuring a subsidy of lands and bonds for a distance of about 250 miles. It declares that under existing legislation the company has no right to the subsidies sought to be procured by the approval of the map.

By Mr. Wells, of Missouri, for the improvement of the Mississippi River between the mouth of the Ohio and the Missouri.

On the 5th, in the House, bills were introduced and referred, as follows:

By Mr. Loughridge, of Iowa: To complete the James River & Kanawha Canal.

By Mr. Donnan, of Iowa: To afford cheap transportation by water from the interior to the Atlantic sea-board by way of the Great Lakes.

The Speaker announced the following House committees:
Pacific Railroads.—Sawyer (Wis.), Sypher (La.), Kellinger (Penn.), Houghton (Cal.), Crocker (Mass.), Willard (Mich.), Corwin (Ill.), McMill (Iowa), Wells (Mo.), Barnum (Conn.), Result, of (Ky.), Creamer (N. Y.), Neal (Ohio).

Post Offices and Post Roads.—Packer (Pa.), Stowell (Va.), Platt (N. Y.), Williams (Mass.), Page (Cal.), Danford (Ohio),

Cobb (N. C.), Cannon (Ills.), Randall (Pa.), Reed (Ky.), Atkins (Tenn.).

Railways and Canals.—McCrary (Iowa), G. F. Hoar (Mass.), Hurlburt (Ill.), Bass (N. Y.), Sherwood (Ohio), Lewis (Tenn.), Taylor (Pa.), Smith (Va.), Arthur (Ky.), Wolfe (Ind.), and Stone (Wis.).

In the Senate on the 8th:

Mr. Chandler, of Michigan, presented a joint resolution of the Legislature of the State of Michigan, asking the construction of the Niagara Ship Canal; also, joint resolutions of that Legislature asking for the survey of a canal across that State. Laid on the table.

Mr. Windom, of Minnesota, introduced a bill to incorporate the Southern Trans-Continental (?) Railroad Company, and to grant the right of way through the public lands to the same. Referred to the Committee on Public Lands.

Mr. Logan, of Illinois, introduced a bill to provide for cheap and permanent transportation for persons and freight between New York and Chicago. He said, as there would probably be some question as to the power of Congress to enact this law, he would ask that the bill be referred to the Judiciary Committee, and it was so ordered. Mr. Logan's bill names Messrs. James Wilson, Lewis E. Parsons, Joseph H. Chadwick, G. Dawson Coleman, Benj. F. Allen, Abner Taylor, Jas. Aiken, Leonard Sweet, Burton H. Campbell, David H. Littler, Robert B. Latham, Shelby M. Culom, Henry S. Greene, Ward H. Lamon, J. Warren Grigsby, Harvey Solomon, George W. Carter, W. T. Seymour, Elisha W. Keyes, and Charles W. Walcott as incorporators, under the name of "The New York & Chicago Postal Railway & Telegraph Company," and gives them authority to construct and operate a railroad with two or more tracks from any convenient point in the City of Chicago, Ill., or within 10 miles thereof on the shore of Lake Michigan, to any convenient point in the City of New York or within 10 miles thereof on the Hudson River or the Bay of New York, the road to be commenced within three years of the passage of the act, and the main line to be completed within six years. The capital stock shall consist of 1,000,000 shares of \$100 each, but may be increased by a vote of two-thirds of the stockholders. The road is to be as nearly upon an air line as the topography of the country, and the prospects of traffic will permit. The tracks shall be laid with steel or solid steel-headed rails, and the road shall be constructed and managed in the best manner known in railroad management. The corporation shall have the right to purchase all necessary lands, cross any highway or navigable stream by tunnel or bridge, so constructed as not to impede navigation. In case of failure to agree on the price of lands needed for the road it shall be reported to the United States District Court for the district in which such lands shall lie, which court shall appoint three commissioners to assess damages, &c.

The bill further declares the road a public highway, and that it shall not be subject to any restriction by State legislation as to rates of fare, or freight, or charges of any kind except taxes to the same extent as other property, nor as to the speed of trains, nor the control and management of said road. One train at least shall be run daily each way between New York and Chicago. The company shall charge for the carriage of through passengers and freight a rate not exceeding 2½ cents per mile for passengers in first-class cars, with an addition not exceeding one-half cent. per mile for palace or sleeping cars, and not exceeding 1½ cents per mile per ton for products of the soil, forests or mines, other than precious metals, nor more than 2 cents per mile per ton for other through freights. Authority is given to construct branches to Buffalo, Pittsburgh, Cleveland, Detroit, Toledo, Cincinnati and St. Louis, and to any other place within 50 miles of the main line; also to extend the said line from Chicago to Omaha. Authority is also given to construct and operate a line of telegraph along the main road and branches, and to transmit messages for any person. Any material necessary for the construction and equipment of the road and branches may be imported free of duty.

In the House the following bills were introduced:

By Mr. Farwell, of Illinois, to provide for cheap transportation between Chicago and New York.

By Mr. Hubbell, of Michigan, for a Niagara Falls ship canal.

Mr. Negley, of Pennsylvania, introduced and put on its passage a bill modifying the Steamboat Passenger act, by allowing towboats on the Ohio and Mississippi to carry 150 pounds of steam pressure in place of 110 pounds, on standard boilers of 42 inches diameter, with plates of a quarter of an inch in thickness. He explained the bill, and stated that it did not change the existing law, but only extended it, as the law would expire by limitation very soon. The bill was passed.

Complaints Against British Railroads.

Mr. Chichester Fortescue, President of the Board of Trade (a department in the cabinet of the United Kingdom) has addressed the following circular to the chairmen, or what we would call the presidents, of the railroad companies of the kingdom. As the Board of Trade has charge of the inspection and reports of the railroads, and is the authority for railroad statistics in the kingdom, its recommendations for legislation are very likely to be followed, and when it advises the companies they are likely to take some pains to heed its admonitions:

BOARD OF TRADE, Whitehall Gardens, Nov. 18.

SIR—Her Majesty's Government desires to call the earnest attention of the railway companies to the enclosed report made to the Board of Trade upon the accidents which occurred on the railways of the United Kingdom in the year 1872, exhibiting as it does a state of things which, it is believed, has not only been continued, but aggravated during the present year. It appears from the report that a large proportion of these casualties are due to causes which are within the control of the railway companies. If it may be contended that the traffic on many lines has very greatly increased, and with it the risks of railway traveling, it is no less true that it is within the power of the companies to take care that the permanent way, the rolling-stock, and the station and siding accommodations are kept up to the requirements of the traffic; that the officers and servants are sufficient in number and quality for the work to be done, and that proper regulations for their guidance are not only made but enforced; that pains are made to test every reasonable invention and expedient devised for the purpose of preventing danger; and that such of those expedients as experience proves to be effective are adopted without undue delay. In the face of the facts collected and analysed by Captain Tyler, and of the numerous accidents of the present year (many of them the subject of Board of Trade inquiries), it is difficult to suppose that such is the case. There can, indeed, be no doubt that methods of working and mechanical contrivances, the value of which has been thoroughly ascertained, have been too slowly introduced; and there is great reason to believe that sufficient provision has not been made for the safe working of the increased traffic by the enlargement or re-arrangement of stations or sidings and the laying down of additional lines of rail. But whatever may be thought of these or other causes as contributing to the result, the present insecurity of railway travelling imposes upon the railway companies the grave responsibility of finding appropriate remedies for so great an evil. In these ob-

servations I do not attempt to distinguish between the various companies, to all of which they do not in an equal degree apply. Another subject which urgently requires attention is the frequent unpunctuality of passenger trains. The inconvenience, vexation and loss caused to passengers by this breach of the conditions upon which the companies profess to carry them, constitute in themselves a serious subject of complaint. But the evil arising from unpunctuality does not end here. The service of the line is disarranged; the chances of accident are multiplied; and trains are forced, in order to make up for lost time, to travel at excessive speed through complicated stations, or under other circumstances where such traveling may be equally dangerous. The returns made by the companies to the Board of Trade, under a recent act, of the accidents which happen to railway servants, show a lamentable number of casualties, often fatal, in proportion to the number employed. It is no doubt true that many of these accidents are due to the negligence and rashness of the men themselves, and to the hazardous nature of their duties. But, at the same time, it is to be feared that the danger of their work is not unfrequently increased by the want of proper accommodation and appliances, or of suitable means of precaution or protection; while sufficient pains do not appear to be taken to enforce upon them the observance of the regulations made for their safety. The companies will feel the necessity of seriously considering the means of preventing so great a loss of life. Her Majesty's Government are fully sensible of the difficulties incidental to railway working in a country where the traffic is so great and so various, as well as of the efforts which have been made by the railway companies, in many respects with remarkable success, for the accommodation of the public; but safety for life and limb, which ought to be a paramount object, has, nevertheless, not been sufficiently secured, and great and increasing dissatisfaction is the result. Her Majesty's Government, therefore, reserving their own liberty to consider at any time the expediency of legislation upon any part of this important subject, have deemed it their duty to call the attention of the railway companies to the whole question, in the hope that they, in whose hands the means of improvement mainly rest, will themselves make every effort to meet the reasonable demands of the public and of Parliament. I request that you will bring this letter and the accompanying report before your board.

I am, Sir, your obedient servant,

"C. P. FORTESCUE."

CHICAGO RAILROAD NEWS.

Chicago, Burlington & Quincy.

Mr. George Armcur is building for the use of this road on the Joy slip, near Twenty-second street bridge over the South Branch of the Chicago River, a new grain elevator which will hold 1,500,000 bushels and will cost about \$350,000. It is to be completed about the 1st of May next, so as to be utilized during the next season of navigation.

A train of cars crossed the Burlington Bridge over the Mississippi on an average every 41 minutes in November, making a total of 998 trains during the month.

This company is building two very fine mail cars after the most approved pattern at their shops in Aurora. Little work is at present in progress upon these shops, but it is designed that they shall be completed as early in the spring as possible.

Gilman, Clinton & Springfield.

Mr. Hinckley has been thoroughly installed in the office of Receiver, during the past week, by the withdrawal, on the part of Judge Treat, of the injunction granted by his court, restraining Mr. Hinckley from entering upon those duties. Mr. Hinckley promises to run the road conservatively. He is now engaged in cutting down expenses as far as possible. The receipts do not much more than pay the expenses of the road now. The line is entirely unfenced, and it is the design of the Receiver, as soon as possible, to fence it, and then to apply the surplus earnings to the cancellation of indebtedness as rapidly as possible.

Traffic.

The receipts and shipments indicate a very healthy traffic compared with that at this time last year. For the first week of December the receipts and shipments were, approximately, in car loads:

	Receipts		Shipments	
	1873.	1872.	1873.	1872.
Flour.....	700	531	616	360
Wheat.....	2,287	927	1,217	324
Corn.....	370	635	154	86
Oats.....	293	223	131	128
Live hogs.....	3,130	2,141	593	339
Cattle.....	603	803	256	408
Total car loads..	7,385	5,293	2,967	1,645

This shows an increase this year of 39 per cent. in the receipts and 80 per cent. in the shipments, which ought to be satisfactory progress.

Freight Car Exchanges.

The recent article in the GAZETTE on this subject gives rise to a good deal of talk among railroad men in this city. The subject is one of great interest, and is regarded as an unsolved problem as yet. The mileage-paying roads and the mileage-receiving roads are not disposed to come to any immediate agreement on the subject. Mr. McMullin, of the Chicago & Alton road, thinks that a fair mileage should be charged, and then a reasonable time allowed for the return of a given car, and after that a fair *per diem* should be charged on each car until it is returned. This, he thinks, would prevent careless and unnecessary delay in the return of cars. He also suggests that there should be a general railroad clearing-house to which all railroad companies should report their borrowed cars, and the time that they are in their possession. This clearing-house should settle the question of mileage and *per diem* as between the several roads. As it is at present, there is constantly a liability to misunderstanding as to the time that cars are in the possession of any given railroad. Railroad men are anxious that some general rule should be enacted and enforced in regard to this matter.

Stock Transportation Suit.

The Pennsylvania Railroad Company has brought suit in the United States District Court in Chicago against John B. Sherman, of Chicago, Archibald M. Allerton, of New York, and Samuel W. Allerton, all of whom are or have been largely interested in the live-stock trade and many of the great stock yards of the country—as in Chicago, New York, and St. Louis. It has an origin similar to that of sundry other suits by other companies, the charge being that in consideration of certain leases of yards the defendants engaged to use all their efforts to bring stock business to the company's road, and failed in so doing.

Illinois Central.

The business on this road shows a little improvement over last week, although the fact that the Ohio and Mississippi rivers are entirely open and navigable for hundreds of miles above Cairo operates to reduce the business which would otherwise be transacted on this road at this time of year.

The railroads running north and south in this State feel particularly the deleterious effect of the Illinois railroad law at this time, since they are utterly prevented from so modify-

ing their rates as to make it for the interest of farmers to ship their produce. The railroads running west from Chicago are quite busily engaged in transporting to this city live stock, especially hogs, which are arriving in altogether unprecedented numbers. But while this is the case with these roads, the transportation business on the north-and-south roads (coal excepted) is in a very stagnant condition.

During the month of November the Land Department sold 1,326.28 acres of construction lands for \$10,812.63, and 120 acres of free lands for \$1,640, a total of 1,446.28 acres for \$12,452.63. The cash collections were \$33,396.33.

The earnings of the Traffic Department for November were:

	In Illinois. 707 Miles.	In Iowa. 402 Miles.	Total. 1,109 Miles.
Freight.....	\$310,902 07	\$98,328 00	\$409,230 07
Passengers.....	94,527 50	35,595 10	130,122 60
Mails.....	6,375 00	3,059 24	9,434 24
Other sources.....	71,125 00	2,520 76	73,645 76

Total, November, 1873.....\$482,929 50
Total actual earnings, November, 1872.....573,592 00

This shows a decrease of 15½ per cent. in the Illinois earnings, an increase of 13½ per cent. in the Iowa earnings, and a decrease of 10½ per cent. in the total earnings.

TRAFFIC AND EARNINGS.

—The tonnage of bituminous coal over the lines given was as follows for the eleven months ending November 29: Huntington & Broad Top, 1873, 435,366 tons; 1872, 284,957 tons; increase, 150,409 tons, or 52½ per cent. Clearfield coal over Tyrone Division, Pennsylvania Railroad, 1873, 564,769 tons; 1872, 533,595 tons; increase, 31,174 tons, or 5½ per cent.

—The anthracite coal tonnage of the different lines given for the eleven months ending November 29 was as follows: Lehigh & Susquehanna Division, Central Railroad of New Jersey, 1873, 1,944,429 tons; 1872, 1,616,809 tons; increase, 327,620 tons, or 20½ per cent. Lehigh Canal, 1873, 735,680 tons; 1872, 766,348 tons; decrease, 30,668 tons, or 4 per cent. Northern Central, Shamokin Division, 1873, 535,398 tons; 1872, 538,064 tons; increase, 2,666 tons, or 0½ per cent. Delaware & Hudson Canal, 1873, 2,619,868 tons; 1872, 2,711,057 tons; decrease, 91,189 tons, or 3½ per cent. Pennsylvania Coal Company, over Erie Railway, 1873, 1,152,366 tons; 1872, 1,131,108 tons; increase, 21,258 tons, or 1½ per cent. Delaware, Lackawanna & Western Railroad, 1873, southward, 1,981,788 tons, northward, 878,158 tons, total, 2,859,946 tons; 1872, southward, 1,891,858 tons; northward, 744,249 tons, total, 2,636,107 tons; total increase, 223,839 tons, or 8½ per cent.

—The coal tonnage of the Philadelphia & Reading Railroad for the fiscal year ending November 30 was: 1873, 6,516,553 tons; 1872, 6,185,434 tons; increase, 331,119 tons, or 5½ per cent. The coal tonnage of the Schuylkill Canal for the year was: 1873, 743,796 tons; 1872, 838,191 tons; decrease, 94,395 tons, or 11½ per cent.

—The anthracite coal tonnage of the Lehigh Valley Railroad for the business year ending November 30 was: 1873, 4,144,340 tons; 1872, 3,850,118 tons; increase, 294,222 tons, or 7½ per cent. The bituminous coal tonnage for the year was: 1873, 28,026 tons; 1872, 27,052 tons; increase, 974 tons, or 3½ per cent.

—The earnings of the Great Western Railway of Canada for the week ending November 14 were: 1873, \$21,493; 1872, \$25,276; decrease, \$3,783, or 15 per cent.

—The earnings of the Grand Trunk Railway of Canada for the week ending November 15 were: 1873, \$45,100; 1872, \$37,400; increase, \$7,700, or 20½ per cent.

—The earnings of the Central Pacific Railroad for the month of November were: 1873, \$1,296,812; 1872, \$1,293,957; 1871, \$997,233; increase, 1873 over 1872, \$2,855, or 0½ per cent; increase, 1873 over 1871, \$399,579, or 44½ per cent. For the eleven months ending November 30 the earnings were: 1873, \$12,906,402; 1872, \$11,886,969; 1871, \$8,794,718; increase, 1873 over 1872, \$1,019,433, or 8½ per cent; increase, 1873 over 1871, \$4,111,689, or 46½ per cent.

—The earnings of the Richmond & Petersburg Railroad for the year ending September 30, 1873, were:

Gross earnings (\$6.40 per mile).....	\$160,227
Expenses, including interest.....	145,407
Balance.....	\$14,820

The earnings show a decrease of \$92 from the previous year. The road carried 35,702 tons of coal from the Clover Hill pits during the year.

—The shipments of iron ore by water from the Lake Superior region for the season of 1873 were: Marquette, 525,539 tons; Escanaba, 475,630 tons; L'Anse, 72,410 tons; total, 1,073,579 tons. As compared with the previous year there is an increase of 117,748 tons, or 28½ per cent., from Marquette; a decrease of 13,059 tons, or 2½ per cent., from Escanaba, and a total increase of 177,099 tons, or 19½ per cent. No shipments from L'Anse were reported in 1872. The shipments of pig iron were: 1873, Marquette, 24,732 tons; Escanaba, 8,648 tons; total, 33,380 tons; total, 1872, 38,042 tons; decrease, 4,662 tons, or 12½ per cent.

—The following companies have thus far reported earnings for November:

	1873.	1872.	Inc.	Dec.	P. c.
Atlantic & Pacific.....	\$8,563	\$100,633	.....	\$11,780	11½
Bur., Cedar Rapids & Minnesota.....	105,430	98,592	\$6,838	.....	7
Central Pacific.....	1,296,812	1,293,957	2,855	.....	0½
Cleveland, Col., Cin. & Ind.	311,935	386,614	.....	74,679	19½
Chicago & Northwestern.....	1,039,306	1,067,387	.....	28,081	2½
Erie.....	1,570,023	1,745,729	.....	175,706	10½
Illinois Central.....	622,433	696,475	.....	74,042	10½
Milwaukee & St. Paul.....	771,800	702,838	\$68,962	.....	9½
Missouri, Kan. & Texas.....	309,000	227,333	\$81,667	.....	35½
Ohio & Mississippi.....	266,533	326,354	.....	54,421	17
Pacific of Missouri.....	308,632	326,668	.....	18,036	5½
St. Louis, Kan. City & Northern.....	232,783	207,686	.....	34,904	13

—The earnings of the Union Pacific Railroad for the month of October were:

	1873.	1872.	Inc. or Dec.	P. c.
Earnings.....	\$1,170,586 41	\$980,706 09	\$189,880 32	19½
Expenses.....	594,763 67	538,878 33	55,885 34	10½

Net earnings.....\$575,822 74
For the ten months ending October 30, the report is as follows:

	1873.	1872.	Inc. or Dec.	P. c.
Earnings.....	\$8,536,611 02	\$7,290,237 38	\$1,246,373 64	17½
Expenses.....	4,287,646 42	4,086,401 29	201,245 22	4½

Net earnings.....\$4,248,964 60
The expenses were 50½ per cent. of earnings in 1873, and 56½ per cent. in 1872. The earnings were \$8,272 per mile in 1873 and \$6,995 in 1872.

—The revenue of the Chesapeake & Ohio Canal for the month of October was \$70,533.87; November, \$48,075.65; total for the two months, \$118,609.52; same period in 1872, \$94,583.26; increase \$24,026.26, or 25½ per cent. During the two months 1,939 boats, carrying 206,001 tons of coal, cleared from Cumberland.

—The shipments of Cumberland coal over the various lines

for the eleven months ending November 29 were as follows: Baltimore & Ohio Railroad, 1,562,148 tons; Chesapeake & Ohio Canal, 772,145 tons; Bedford Division Pennsylvania Railroad, 91,253 tons; total, 2,425,546 tons.

—The earnings of the Chicago & Northwestern Railway for November were: 1873, passengers, \$281,968.32; freight, \$711,079; miscellaneous, \$46,258.21; total, \$1,039,305.53; 1872, total, \$1,067,866.67; decrease, \$28,081.14, or 2½ per cent.

—The number of loaded cars passing Midlin, on the Middle Division of the Pennsylvania Railroad, eastward, in the month of November was: 1873, 34,022; 1872, 25,267; increase, 8,755 cars, or 34½ per cent.

—The earnings of the Great Western Railway of Canada for the week ending November 21 were: 1873, \$19,415; 1872, \$24,633; decrease, \$5,218, or 21½ per cent.

—The earnings of the Grand Trunk Railway of Canada for the week ending November 22 were: 1873, \$40,000; 1872, \$39,600; increase, \$400, or 23½ per cent.

PERSONAL.

—Mr. John B. Adams recently resigned his position as a conductor on the Boston & Albany Railroad. He had been on the road for 33 years, and, if not the oldest, was one of the oldest conductors in the country.

—Mr. L. W. Durgin, Master Mechanic of the Indianapolis Division of the Cleveland, Columbus, Cincinnati & Indianapolis road, was presented with a gold watch and chain by the employees of the road at Indianapolis, December 4. Mr. Durgin has gone to California for the benefit of his health.

—Mr. Daniel Ryan, Road Master of the Northern Division of the Des Moines Valley Railroad, died at Des Moines, Iowa, December 1, of inflammation of the lungs resulting from exposure while on the road.

—Foreign journals announce the death of Louis Le Chatelier, at the time of his death Inspector General of mines in France, but long connected with the railroads of his native country, and eminent for his investigations and experiments concerning locomotives. In 1846 he was put in control of the railroads then working, and was connected afterwards with several leading French and foreign railroad companies. He published "Experimental Researches on Locomotives," "German Railroads," "The Stability of Locomotives" and "The Mechanism of the Guide," and was eminent for great engineering and industrial works other than railroads. The last invention for which he was known was the counterpressure steam brake, for which the Vienna Exposition awarded him a grand diploma of honor.

ANNUAL REPORTS.

Connecticut Valley.

This company's road is 45 miles in length from Hartford southeast down the west bank of the Connecticut to Saybrook Point.

The earnings and expenses for the year ending September 30 were:

	1873.	1872.
Passengers.....	\$169,966 24	\$102,863 98
Freight.....	81,971 14	56,464 20
Mails, express and miscellaneous.....	23,141 18	5,533 25
Total earnings.....	\$266,078 56	\$164,861 43
Maintenance of way.....	31,119 75	17,939 15
Maintenance of motive power and cars.....	35,774 24	25,766 91
Miscellaneous expenses.....	93,798 73	55,441 93
Total expenses.....	\$160,692 72	\$99,087 99
Net earnings.....	\$105,385 84	\$65,773 44
Coupons on bonded debt.....	70,770 07	.....
Balance.....	\$34,615 77	.....

The increase in gross earnings was \$61,604.73, or 42½ per cent., and in net earnings \$59,622.40, or 130½ per cent. The expenses were 60½ per cent. of the earnings, which were at the rate of \$5.913 per mile.

During the year passenger trains ran 111,056 miles; freight trains, 28,424 miles; other trains, 4,520 miles; a total train mileage of 144,000 miles. The trains carried 285,193 passengers, equal to 3,763,821 carried one mile, and 46,692 tons of freight, equal to 1,302,908 tons carried one mile.

The equipment of the road consists of 6 locomotives, 14 passenger and 5 baggage cars, 110 freight and 50 coal and gravel cars.

The capital stock is \$1,033,500 and the funded debt \$1,011,000; a total capital account of \$2,044,500 or \$45.433 per mile. The interest charge on the debt amounts to \$1,573 per mile.

Great Western.

This company advertises that it desires to make through freight arrangements for next season with a line of steamers between Hamilton, Ont., and Montreal. The line to consist of not less than three steamers to begin with and to be increased as business requires. For particulars, application is to be made to Mr. J. Crampton, General Freight Agent, at Hamilton, Ont.

Midland of Canada.

This company advertised in English journals of the 29th ult. an issue of £150,000 sterling 6 per cent. second-mortgage bonds at 82, a coupon due January 1 being attached. The company has now 100 miles of road in operation, and 20 miles well under way, and its funded debt is now only about £3,000 per mile in operation. The new loan is for the purpose of extending the line to Georgian Bay, 33 miles, and changing the gauge from 5 ft. 6 in. to the standard gauge of 4 ft. 8½ in., the latter step having been made necessary by the change of the Grand Trunk, with which it connects at Port Hope.

A Traveling Repair Shop.

The Central Pacific Company is having fitted up a traveling machine shop in its Sacramento shops. The shop is a large car, formerly used as a boarding car, and contains a lathe, small planer, drill press, vice-bench and a small engine which furnishes power. There is also a steam pump. The traveling shop is to be used in repairing breakdowns on the Mountain Division.

Ohio River Improvement.

The report of the engineer officer in charge of the Ohio River improvements deals largely with the plans proposed for increasing the facility of navigation of the upper portion of the river. The principal trouble experienced is an absolute lack of water, and there is no source from which it can be derived. The proposal to bring water from Lake Erie is manifestly absurd, owing to the difference in level, and the construction of reservoirs on the upper tributaries is not considered practicable or advisable. A slack water system of locks and dams is considered the best plan. This, however, is objected to by the coal boatmen. It is thought that an arrangement of dams and gates can be made, which will allow tows of coal boats to pass through without difficulty.



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CONTENTS.

ILLUSTRATIONS :	Page	EDITORIALS :	Page
Cutter Bar for Lathes	493	Record of New Railroad Construction	493
CONTRIBUTIONS :		EDITORIAL NOTES	498
Interchange of Cars—More Line Cars Wanted	493	GENERAL RAILROAD NEWS :	
How They Repair Track in a Chicago Yard and in Some Other Places—Recruitment in the Yard	493	The Scrap Heap	493
Interchange of Cars—Some Experiences	493	Chicago Railroad News	495
EDITORIALS :		Traffic and Earnings	495
Advancement	496	Personal	495
Legislation for Cheap Transportation	497	Elections and Appointments	498
American Railroad Securities Abroad and at Home	497	Old and New Roads	499
A Congressional Charter	497	MISCELLANEOUS :	
The Burlington, Cedar Rapids & Minnesota Railroad	498	Argentine Railroads	493
		Awards of Premiums for Machinery by the American Institute	494
		Transportation in Congress	494
		Complaints Against British Railroads	494

Editorial Announcements.

Addresses.—Business letters should be addressed and drafts made payable to THE RAILROAD GAZETTE. Communications for the attention of the Editors should be addressed EDITOR RAILROAD GAZETTE.

Contributions.—Subscribers and others will materially assist us in making our news accurate and complete if they will send us early information of events which take place under their observation, such as changes in railroad officers, organizations and changes of companies, the letting, progress and completion of contracts for new works or important improvements of old ones, experiments in the construction of roads and machinery and in their management, particulars as to the business of railroads, and suggestions as to its improvement. Discussions of subjects pertaining to ALL DEPARTMENTS of railroad business by men practically acquainted with them are especially desired. Officers will oblige us by forwarding early copies of notices of meetings, elections, appointments, and especially annual reports, some notice of all of which will be published.

Advertisements.—We wish it distinctly understood that we will entertain no proposition to publish anything in this journal for pay, EXCEPT IN THE ADVERTISING COLUMNS. We give in our editorial columns OUR OWN opinions, and those only, and in our news columns present only such matter as we consider interesting and important to our readers. Those who wish to recommend their inventions, machinery, supplies, financial schemes, etc., to our readers can do so fully in our advertising columns, but it is useless to ask us to recommend them editorially, either for money or in consideration of advertising patronage.

ADVANCEMENT.

Every man with the right sort of ambition desires promotion in his occupation, business or profession. The waiter at a hotel looks forward to becoming "head-waiter," the news-boy to becoming proprietor of a news-stand, and nearly all mechanics contemplate the possibility of becoming foremen. This ambition runs through all grades and positions in life, and pervades every class of railroad employees. The foreman looks forward to becoming master mechanic, and conductors, engineers and agents aspire to superintendents' positions, and the latter to that of general manager or president. All this is very commendable, if only righteous means are employed to secure advancement. As the subject is of very great interest to many of our readers, and as it is one about which we very frequently receive letters, a little consideration of it may not be amiss at this time.

The question which presents itself to those employed on railroads is usually a very practical one. The great majority of such persons are, of course, in subordinate positions, doing work which gives them neither name nor reputation. They are without influential friends, and there are many other people who are ready and able to do the same work should it be necessary. Take such a person with—as is usually the case—an extremely limited education, employed for say ten hours per day in more or less exhausting manual labor. Each day's duty is a repetition of that preceding it, and if well done attracts no commendation, and is only noticed if neglected. A man in such a position may, as many do, continue year after year performing faithfully the work which is set him to do, and to say that such a way of life, without other ambition, is not useful, and often very contented, would be to deny the evidence which can be seen daily almost anywhere we may choose to look for it. While we do not purpose to discuss the conditions nor the requisites for happiness, nor to decide whether the contented method of existence or more ambitious aspirations are most likely to confer that blessing, we must, in order to indicate the road which leads to advancement, point out

that those who intend to travel in it cannot make much progress if they spend all their time by the wayside in the enjoyment of sweet repose.

The railroad man, with his daily duty before him, may be skillful and efficient in the performance of it, but if he wants to fill a more responsible place he must qualify himself for the duties of such a position. It is very common to find men mourning and lamenting, in a state of chronic discontent, that the world does not offer them advancement. They want promotion before they are prepared to perform the duties which promotion would impose on them. If all the energy which is expended in uttering complaints at the want of appreciation by railroad officers of imaginary merit were expended in preparing for advancement, there would be more promotions and less cause for discontent. We have before us now a letter received very recently, from which we make the following extract, which shows this feeling, which is evidently cherished by the writer like many another "luxury of wo."

After directing that his paper be discontinued, the wisdom of which we will not discuss, he says: "my Reason & I suppose a good many other R R Employees is that I spend for Paps & Drawing, \$3.50 per month to learn all new Inventions & Ideas, & thereby take all advantages to do good Work & economise Labor the Benefit thereof can be seen by the Most Ignorant Officers if they wish to see it, but as a rule with rare exception they always prefer Men with smooth tongue fine manners that can show off no matter if he knows or not whether a Bar of Iron cut in with a tool 1/2 in. across or lengthways the Grain, does Injure or not or in what direction of a cut is the worse a throught, competent Mechanic is not now a Days taken notice of but stand off & throw a Engine together with a couple of Monkey Wrench Mechanics & make a great Display is all ok on the pay Role."

Now, this correspondent is evidently of the impression that he and his attempts at acquiring knowledge are not appreciated, which may be and probably is true, but if established will not be a very remarkable fact in this undulating world of ours. It is a complaint which nearly everybody feels disposed to make on slight provocation. The people, for example, who advertise locomotives on another page of the GAZETTE are, we doubt not, all firmly and honestly of the opinion that their engines are better than those made by the other builders; and we think it is quite probable that if each expressed his honest convictions he would reveal a sort of lowering surprise that the world generally is not unanimously of that opinion. The same thing might probably be said of all our other advertisers, and mankind generally. Want of appreciation is not peculiar to railroad service. If, therefore, railroad employees morbidly foster the idea, which many do, that if their lots had only been cast in some other position in life their merits would have shown to better advantage, and the way to advancement would not have been obstructed as they find or rather suppose it to be now, they are simply deluding themselves. The way to promotion to the man who has his own career to make is nowhere an easy one, and if achieved by honorable means is the result of industry, integrity, intelligence, and that sort of clear-minded energy which sees the right thing to do at the right time, and does it. We say that advancement is the result of these traits. Now there are many persons at the present time at work on railroads whose lives have been embittered because they find themselves now where they were ten or twenty years ago. During all that time they have been ready to become energetic as they were promoted and determined to seek knowledge and store their minds with wisdom as soon as their duties required them to exercise these virtues. In the meanwhile they are like the Irishman who was found in his shanty, during a storm, under the table to keep off the rain which leaked through the roof, and when asked why he did not mend it said that he could not go out then because it was raining, and when it was suggested that he should mend it when it was not raining, said it did not leak then. They do not seek knowledge when they are in a subordinate position, because they say there is no occasion to exercise it, nor is it appreciated. When the advancement comes, there will be no time for doing what should have been done long before. Take the case of our correspondent. We have no means of knowing, but probably he is a good workman. There is doubtless some ground for his complaint that good mechanics are not appreciated or paid as they should be. Grant that it is true and what does it establish—simply that railroad employers and railroad companies do not exercise strict justice in their dealings with those they employ. Now certainly this should not be such a surprising discovery to anyone with any considerable experience with the ways of the world. Injustice goes stalking abroad and has roamed under only partial restraint since the world began. Anyone disposed to give up the struggle of life for that reason is not fit to live. It is one of the great facts of existence. Every child meets it, every school-boy places himself on the defensive to protect himself, every workman uses whatever means he can to resist it, and every business man, from the beginning of his experience until the time when his final profit and loss

account is closed, is obliged to exercise all his shrewdness, take counsel of his experience and employ all the tact he can, to get and to keep whatever is justly his own.

If therefore our correspondent and those like him do not look for promotion or appreciation until all injustice is eliminated between employer and employed, or until those they work for will carefully and accurately estimate their true value, they will probably wait to the end of their lives, and then be disappointed. But supposing an entirely just estimate of their capacity should be made with a view to placing them in a more responsible place, say that of assistant master mechanic, let us see what would be the result. Now the only evidence from which we can judge is the letter before us. From this alone it is evident that he is so illiterate or has such an imperfect knowledge of the English language that if called upon to correspond or make reports, or do any other similar work, much of which is required of those occupying such positions, he would be quite incapable of doing it even respectably well. Even supposing that he was otherwise qualified to fill such a position, he would not be appreciated because his superior officers and those with whom he communicated would probably know very little more of him than we do, and would form their impressions entirely from his letters and other compositions. Now evidently one of the first things for him, and for many others like him, to do would be to learn how to write a respectable English letter. This can be done in a comparatively short time, and even late in life with little labor. There is no service which a railroad company could do to its employees which, for the cost and labor, would have so much value to both parties as instruction to the men in writing ordinary letters and reports. The common and almost intuitive operations to many of us, of addressing a letter, the use of capitals, the form and position and modes of expression of the common amenities of written communication, are matters of mystery to many such men, as much as the handling of a locomotive would be to those who will read this, and who are daily in the habit of writing many letters.

We of course do not wish to underestimate the value to a mechanic of mechanical skill. The first duty of every one is to know his business, and when once in his apprenticeship, all other knowledge should be made subordinate to "learning the trade." But if a mechanic expects advancement because he is a skillful workman, and he is nothing more, he will be quite sure to be disappointed. When a mechanic is advanced to the position of foreman, another kind of knowledge and skill in addition to that of his trade is demanded of him. He must be able to calculate, to make reports, to look ahead so as to employ those under him to work to the best advantage, and above all, to command that kind of respect which is the result of decision and some degree of dignity of character.

The next advancement, say to that of master mechanic of a division, or of a short road, will demand a still wider range of ability. Some scientific knowledge is then needed, capacity for designing and proportioning machinery, the ability of estimating accurately and comparing the performance of engines and other machinery. These qualifications cannot be acquired suddenly. They are the result of careful cultivation, and are of very slow growth. Now our correspondent and all others who aspire to filling responsible places, should lay this fact to heart, that men are appointed to such positions because those who appoint them want certain duties performed. Those who look for such appointments must therefore be ready with the qualifications when the opportunity offers. The most successful business men are those who by economy accumulate surplus capital for use when those who are less wise are in need and compelled to get money at a sacrifice. Those employed in the service of railroad companies, although possibly not able to accumulate much surplus capital, may lay up a store of knowledge which will serve them when the golden opportunity comes, as it is quite sure to, to the man who is ready to embrace it.

But many readers may say, as some have, that we have to a greater or less degree done what is advised and still we stand waiting. It is, of course, impossible to give any general advice which can be followed in all such cases. We are quite sure, however, of that advice which we have already given, which is to be ready as it were to catch the passing opportunity "on the fly," and also of the wisdom in nearly all cases of applying for a vacant place which the applicant can fill. Often the first information which a railroad officer has of just the kind of ability which he is looking for comes to him through the personal application of the person seeking the place. If this is done in a straightforward, manly way, in a majority of cases it will not lessen but increase the esteem for the person making it, even if the application is unsuccessful; and when the next opportunity occurs, he who before was unsuccessful may be among the first who will be thought of for the vacancy. There is usually no greater folly possible than for a subordinate on a railroad to wrap himself up in the mantle of his pride, and expect those who have appointments to make to seek him out like Cincinnatus of old. Railroad superintendents and presidents are much too busy for that, and he who expects it will probably exchange his pride for bitter disappointment. There is no harm, but

merit, in respectfully and modestly asking for employment. Of course all clamor and importunity should be avoided and suppressed, as other breaches of the peace are or should be. Above all, though, let him who seeks advancement make sure that he deserves it.

LEGISLATION FOR CHEAP TRANSPORTATION.

The Committee on Railway Transportation of the New York Cheap Transportation Association has issued a report, which after some discussion of the importance of cheap transportation—which, by the way, is precisely the same as the importance of cheap bread, meat, clothing, rents, books, furniture, etc., and in no way different—makes recommendations for positive legislation. The Association is composed chiefly of merchants who receive and ship large quantities of freight, and whose experience ought to render them capable of considering the matter with a good degree of intelligence: at least, they are not such a class of men as those who recently advertised their profound ignorance of the inexorable laws of trade by declaring that no less than a certain price should be received for one of the chief farmers' products. The Association, too, has stated its objects in a sensible way in its constitution, and gave promise of working for them rationally.

The committee's report declares the following to be "prominent among the defects and abuses of our present system":

I. The present method of undertaking the construction of railways without a paid-up capital.

II. The inflation commonly known as "watering of stock" by which its nominal value is largely increased, thereby making it necessary to unduly tax travel and commerce to secure it a value.

III. By rings in their management, through which both the public and the non-managing stockholders are fleeced to enrich a few prominent officials and managing stockholders.

IV. The present system, which necessitates the operation of passenger and freight traffic over the same roadbed in which the passenger traffic has the right of way, thus making it necessary for freight trains to lay up two-thirds of the time when they should be rolling on to their destination.

V. The partial representation of the stockholders in the boards of direction.

Now, there are three classes of evils charged here: first, the failure of the stockholders to get their property managed honestly and to their best profit, in which of course no one has anything like the interest or the power that they have; second, extortion in rates for the sake of paying dividends on watered stock, which would be a wrong toward the public, but which does not exist, no company ever having raised its rates in consequence of an increase in the amount of its stock, no company being able, except in a small part of its business, to raise its rates without the cooperation of its rivals, and nothing preventing the charging of the highest rates when the share capital is smallest; the third evil is what is charged to be an injudicious and uneconomical system of working railroads, it being the system, however, used on every railroad in the world, we believe, which has both freight and passengers to carry; and it is at least probable that professional railroad men, whose lives have been devoted to working railroads, and whose sole source of support often depends on working them profitably, are not all in error, and these New York merchants alone right.

The following are the remedies which the report suggests:

I. Legislation, by which our present system of railways can be regulated and improved, and

II. Competition, which will complete and carry out the reform which legislation must inaugurate.

Under the head of legislation we must have the following laws:

I. A law creating a Board of Railway Commissioners, who shall be clothed with power to establish and regulate rates for transporting freight over all railroads doing business in this State, and to prescribe a uniform system of keeping railway accounts.

II. A law prescribing an equitable system of proportional or minority representation of the stockholders in the boards of direction.

III. A law restraining railway companies from paying interest on dividends beyond a fair and just return on the actual cost of their property to their stock and bondholders, and compelling them to expend all sums in excess of such amount, and what is required to keep their roads in proper repair and pay their necessary operating expenses, on their moving, handling and terminal facilities for public security and convenience, and to reduce their transportation charges when such facilities are in a perfect and completed condition.

IV. A law prohibiting all railway companies from making unjust and excessive discrimination against places which are not competing points.

V. A law prohibiting all railway companies from delegating their business to separate corporations, now known as fast freight lines, the entire receipts of which do not go into the treasury of the roads over which they run.

VI. A law to prohibit the leasing, consolidation or combination of parallel lines of road, by which competition is destroyed and the people's highways converted into monopolies.

VII. A law prohibiting railway companies from acquiring or holding more real estate than is necessary for the operation of their roads, and prohibiting railway companies from engaging in mining, or any business other than that of transportation.

VIII. A law making it a penal offense for any public official to accept or use the free pass of any railway company, and prohibiting railway companies from granting such passes to any but regular employees of such railways.

Now, one of these remedies, that of giving State officers the power to fix railroad rates, is virtually a confiscation of railroad property. A person not interested in making a business yield a profit, but on the contrary the agent of the customers of that business, is authorized to fix the terms on which that business shall be done. This is very much as if an agent of the New York bakers should be author-

ized by law to fix the price at which merchants should sell flour. For it should always be remembered that in the business of transportation consumers do not substantially balance each other numerically or in influence, as in so many other branches of business. All men are customers of carriers, and there is not one who would not be benefited directly and in a manner which he could feel by a reduction of the cost of transportation. The carriers, on the other hand—the people who are peculiarly interested in the profits of transportation—are an insignificant fraction of the community, who could never have the slightest hope of electing a representative to such an office in the face of the interests opposed to them.

The only other check against high rates proposed above is contained in the prohibition of consolidations, which so far have in almost every instance promoted economy of operation and the reduction of rates.

Almost every other proposition is one intended to prevent injury to the railroad proprietor. Now it is entirely true that everything which saves money to the stockholder will sooner or later save money to the community also; but we submit that the proper judge of the laws needed to this end is the railroad proprietor himself. He is very much more interested than anyone else in saving himself from robbery; he is altogether better acquainted than anyone else with the tricks and methods by which he is robbed—if he is robbed, as he is sometimes—and it is altogether probable that he knows best what is needed for his protection. The laws cannot be too strict; the lack of fidelity of directors and officers to their employers, the shareholders, cannot be too carefully guarded against. But who is fittest to discover and demand the legislation needed, if any additional legislation is needed?

It would seem very strange were the merchants of New York to plan laws and urge their adoption for the protection of Iowa farmers against swindling tree peddlars, the farmers meanwhile remaining indifferent or opposed, and we would be justified in suspecting that the merchants might be mistaken as to the nature or extent of the evils complained of, or the efficiency of the new remedies proposed.

The truth is, it is with railroad business as with almost everything else. It is not so much the lack of laws as of the ability to discover and prove the crimes which they forbid which makes punishments infrequent and misdeemeanors comparatively common. But it is not therefore necessary to prohibit many innocent and advantageous things, as this report proposes to do, in order to avoid the evils. Doubtless bad men in positions of trust will always be able to sacrifice the interest of their constituents or employers. Otherwise the position would not be one of trust. The way should be made plain and easy for the conviction and exemplary punishment of men thus guilty, but no legislation will make such crimes impossible.

American Railroad Securities Abroad and at Home.

The news of the numerous defaults on American railroad coupons due in November had a terrible effect on the German exchanges, which was exaggerated even by sundry false reports published there—and by some true ones. A decree of a court having declared illegal the lease of the St. Louis, Lawrence & Denver Railroad to the Pacific of Missouri, the latter company was enjoined from paying interest on \$1,000,000 of the former's bonds, as it had agreed to do as rental. The entire issue had been taken by a single firm of bankers in Frankfurt, which had intended to sell them, but owing to the unsatisfactory condition of the market did not do so, but kept them as a temporary investment, which now fails them entirely. The Pacific of Missouri seems to have been forbidden by law to pay the interest, so that it could not well be blamed; but its bonds, which with those of the Central Pacific are probably more widely held in Germany than those of any other American railroad, were immediately discredited and fell from about 65 to 50, after which, by the 15th ult., they rose again to 58. Reports affecting the Central Pacific, having apparently no basis whatever, were published at the same time, and its bonds fell to 70, afterward rising to 78. There was a general pressure to sell at any sacrifice, after which there was a reaction such as shown above. A telegram from the President of the St. Louis & South-eastern Railway Company was received at Frankfurt, which read as follows: "Pay coupons early; making arrangements long extension unfunded debt; prospects favorable." This we find published without punctuation in one Frankfurt journal, and not unnaturally it was an enigma to the Frankforters; and another journal says that "in consequence of the dispatch the bonds lost confidence completely," so that "even at the lowest offer they found no buyers;" the editor, however, not having quite lost his head, adds: "We consider it foolish to sacrifice these bonds at the present prices; in any case the road has a higher value, and the bondholders, after the expiration of the time required by law, can take possession of it if the coupon is not redeemed meanwhile." The quotation given is 38, it having been 54 previously, if we remember right, not having any quotations. November 10 seems to have been the time when

prices sunk lowest, after which to the 15th there was generally a recovery, which in some cases was large. Thus Central Pacific 6s rose from 72½ to 78½; San Joaquin Valley 6s from 51½ to 60½; Kansas Pacific 7s from 49½ to 52½; Missouri Pacific 6s from 50 to 58; South Pacific 6s from 40 to 48, and Morris & Essex 7s from 70 to 74. In Amsterdam the prices of solid bonds seem to have fluctuated still more. Among the highest and lowest prices for the week ending November 13 the following were given: Chicago & North-western Madison Extension 7s, 65 to 76½; Winona & St. Peter 7s, 62 to 73½; Central Pacific 6s, 70 to 79; California & Oregon 6s, 49 to 60; Union Pacific 6s, 56½ to 67½; Kansas Pacific 7s, 50 to 55, the closing quotation in every case being the highest, or near to the highest.

Of course it could not fail to give a terrible shock to credit to have so large a number—in fact a large proportion—of the American railroad bonds most largely held in Europe fail to meet their interest. And it is doubtless true that the bad name given by these failures will put great obstacles in the way of all negotiations of American bonds abroad for years to come, and quite probably make a final end there of negotiations of the securities of lines which are still uncompleted and without traffic. We will borrow hundreds of millions in Europe for railroads hereafter, doubtless, but it will probably be chiefly for railroads which are not only constructed and in operation, but are earning a considerable margin over the amount of their yearly interest charge. A road which is earning a yearly surplus of \$500,000 for its stockholders is likely to receive attention and confidence when it desires to place a 7 per cent. loan of \$5,000,000; for in this case the new capital must be invested not simply without profit, but so as to decrease profits immensely, in order to leave no earnings to meet the coupons.

The corollary of this, of course, is, that we must either build our new railroads with stock subscriptions, or sell their bonds at home, where it is a little easier to get trustworthy information of their prospects; and probably we must do both. For we venture to say that it is not in Germany and Europe alone that investors have begun to lose confidence in the bonds of new railroad companies; divers and sundry men and women on this side of the Atlantic have invested their savings in Midland, Northern Pacific, St. Joseph & Denver and many other "securities" of a similar kind, and there is reason to believe that hereafter they cannot be made to listen to the voice of the charmer, charm he never so wisely. You may show them by maps, elaborate calculations, or otherwise, that your projected road will when completed pay all its engagements to the bondholders and make the stockholders rich in the bargain; but even if they have faith in your good intentions they will distrust your judgment. Show them a road already built and making money, and they may be willing to lend to it. And this, really, is the proper way. A bond holder is not—at least should not be—a speculator who risks money with the possibility of great profits or of total loss; he wishes first of all security, and to obtain this he asks only a moderate interest, leaving to the stockholder, presumably a capitalist, the opportunities for great profits and the risks of great losses. But when, as in the case of so many new American companies, the stockholders have put no money or next to none into their project—nay, have even let the contracts to themselves at unreasonably high rates—the bondholders have been made to take all the risks without any of the advantages arising from success, and have even had the ordinary risks of every new enterprise increased by the absence of any pecuniary interest on the part of the stockholder and manager, or the presence in him of an interest to make the cost of the road as great as possible within the resources attainable.

A Congressional Charter.

Senator Logan has introduced a bill in Congress for the incorporation of the "New York and Chicago Postal Railway and Telegraph Company," which seems to be one of the schemes for securing cheaper transportation by means of a Congressional charter. We have never seen an explanation of the reasons which will enable a road built under such a charter to carry cheaper than one built under State charters, and after examining the provisions of this charter we are unable to find more than one, which is so evidently a measure of injustice that it is not probable that any member of Congress would vote for it. But so far as the requirements of the charter are concerned, they are only to the effect that the road shall be as straight as practicable, the rails steel or steel-headed, and the construction first-class; that the capital shall be \$100,000,000, which would be \$110,000 per mile or more, and that it may be increased; that its charges shall not be regulated or limited by any State laws, but that they shall not be more than 2½ cents per mile for through passengers in first-class cars and 3 cents in palace or sleeping cars, 1½ cents per ton per mile for products of the soil, of forests, and of mines, and 2 cents for other through freights.

Now there is no line from New York to Chicago which has so large a capital account per mile as this here proposed, so that there is no relief suggested in this direction, and the ordinary rates for passengers are no higher than those stated in this charter. With the present rate of \$22 between New York and Chicago,

the rate per mile is 2.25 cents by the New York Central and Lake Shore; 2.28 cents by the New York Central, Great Western and Michigan Central, and 2.41 by the Pennsylvania route—by none so much as 2½ cents. Fourth-class freight from Chicago to New York is 1.12 cents per ton per mile by the first route, 1.14 cents by the second, and 1.20 cents by the third. The usual summer fourth-class rate is about one-fifth lower. Two cents per ton per mile would be equivalent to 98, 96 and 91 cents per hundred by the three routes respectively between New York and Chicago, and 1½ cents per ton per mile would be 73½, 72 and 68 cents per hundred for the haul, respectively. The lowest of these charges is at the rate of 38 cents per bushel on corn, which will hardly satisfy the Illinois farmer, at least not so long as the lakes and canal will carry it for 17 or 18 cents, as they have done during the past season.

The one privilege to be granted by Congress is expressed in this clause: "Any material necessary for the construction and equipment of the road and branches may be imported free of duty." It ought not to be necessary to point out the gross injustice of such a provision. The other railroads of the country would have to enter into competition with a line which had been virtually partly paid for by the public, including these competing railroads. If I am compelled by law to pay some \$8,000 per mile more for rails than my neighbor, it is evident that I cannot compete with him on equal terms, and the law tends directly to give him a monopoly by shutting every one else out of competition.

The question whether Congress may properly charter a railroad through organized States is one on which there is difference of opinion, and which doubtless will come before the Supreme Court for decision, should any attempt ever be made to act under such a charter. There is now no obstacle, we presume, to the organization under State laws of just such a company as the one proposed in this bill. All the States except Pennsylvania have general incorporation laws which are available and equal, and Pennsylvania will probably have one before the stock can be subscribed to the "New York & Chicago" Company. Indeed it has a general law now, though it is sometimes thought to be obstructive rather than otherwise.

Among the names mentioned as incorporators in Senator Logan's bill we notice that of James Wilson, formerly colonel of an Iowa regiment and since a member of Congress; B. F. Allen, a really wealthy capitalist of Des Moines, Iowa, and President of a Chicago bank; Abner Taylor, a prominent railroad contractor of Chicago; Leonard Swett, a leading Chicago lawyer, once prominent in politics; B. H. Campbell, a friend of the President, formerly a resident of Galena, and now United States Marshal at Chicago; Shelby M. Cullom, late Member of Congress from Illinois; and Ward H. Lamont, a friend and biographer of President Lincoln and his Marshal for the District of Columbia.

Aside from the exclusive privilege of importing materials free of duty, there need be no particular objection to the granting of such a charter, unless it be a constitutional one of interference with the rights of the States.

The Burlington, Cedar Rapids & Minnesota Railroad.

This company has made a proposition to its bondholders, in view of its failure to pay the November coupons, for the payment of that and the two next coupons in scrip bearing 7 per cent. gold interest, and payable March 1, 1877, in gold—that is, it offers its notes in payment of these three coupons, which amount to 10½ per cent. of the whole face of the bonds. Should failure be made in paying interest on this scrip or the principal when due, the bondholders are to receive back their coupons, and with them the right to foreclose. This scrip is to be receivable at par, plus the current premium on gold, for the company's unsold bonds at 90 or its scrip at 40. The company announces that a large part of the net earnings this year have been applied to construction, it being expected that the company's bonds would be sold to replace them, but these net earnings must have been very small.

The line completed this season (the Milwaukee Division) was difficult of construction, crossing as it does the water-sheds, and on its northern end it is very crooked and has heavy grades. It is, too, at right angles with the prevailing course of traffic in Iowa. The Pacific Division is well placed, but it is short as yet, and the country on its proposed extension is as yet very thinly peopled, though very fertile and capable of sustaining a large population and furnishing a heavy traffic, as indeed is nearly all the country near the road where competing railroads are not too close. The main line from Burlington, northward, has already a fair traffic for a new road in a not very thickly peopled country; but it meets competition for a large part of its length, and where even it succeeds in getting most of the traffic it is compelled to carry it at comparatively low rates. The cessation of interest payments, except on the scrip proposed, for a year and a half, will give time to develop the traffic of the line somewhat, and with the country fully developed the road might be well supported, if it could get an even share of the traffic, which, however, it is not likely to get, on account of its direction, though it may get enough to support it well.

Record of New Railroad Construction.

This number of the RAILROAD GAZETTE has information of the laying of track on new railroads as follows:

Baltimore, Pittsburgh & Chicago.—Completed between Centerton and Deshler, Ohio, by the laying of 22½ miles of track. **Wisconsin Central.**—The southern section has been extended from Chelsea north thirty miles to Worcester, Wis.; the northern section southward 12 miles to Penokee, Wis., 30 miles south of Ashland. **Nashua & Rochester.**—Track laid from Rochester, N. H., southwest 15 miles to Lee, N. H. **Peoria, Atlanta & Decatur.**—Extended southwest 7½ miles to a point within three miles of Meckinaw, Ill. **Southern Pacific**

of California.—The San Fernando Branch is completed from Los Angeles northwest 35 miles to San Fernando, Cal., and another branch from Florence to Las Nietas, 7 miles.

This is a total of 99 miles of new railroad, making 3,454½ miles completed in the United States in 1873.

CAR ROBBERS are, we might almost say, common in this country. Every few months we hear that it has been discovered that a regular system of plundering freight cars at stations or while running has been discovered on some road, and that some of the criminals have been arrested; but we very rarely hear that these criminals are punished. Perhaps they are sometimes, but if so very little noise is made about it. They seem to be less tender with the poor thieves in England, for we see that nine men, chiefly draymen, who had been engaged in stealing goods from packages sent to the receiving depots of the London & Northwestern Railway, seven of them being in the service of a single firm, were actually tried, and not only tried but convicted, and when convicted sentenced, two of them to ten years, one to seven years, two to five years and one to two years' penal servitude, the Judge remarking: "It is a case of almost unprecedented enormity. I know not if you were all leagued together for the purpose of committing these systematic robberies, or whether each was plundering his own van on his own account. It matters not. It is absolutely essential for the protection of the public, who are compelled to intrust their property to carriers and railways, and for the protection of carriers and railway companies from the depredations of their servants, so easily effected and so difficult to detect, and of late becoming so frequent and formidable, that when detection is made the offences shall be visited by exemplary punishment." All of which is very true and deserves to be brought to mind in various American courts, where, we fear, the thieves are getting the impression that stealing goods en route is not much of a crime after all.

A MILITARY RAILROAD is to be constructed on the Gold Coast of Africa by the British Government, to aid in carrying on the vexatious Ashantee war, which, like all wars in districts where wheeled vehicles are unknown, and where consequently roads do not exist, is carried on with immense difficulty by reason of the almost impossibility of getting stores forward. Material has been forwarded for making a light road of standard gauge 6½ miles long, the ties being 8 feet long and creosoted, and the rails weighing 24 pounds per yard. The motive power consists of three "steam sappers," suitable for common roads, or, when flanged wheels are substituted, for railroads, and largely used by the Royal Engineers in various operations of construction, which weigh five tons each; while the other rolling stock is made up of ten light cars for carrying disabled men, and eight small road wagons with both plain and flanged wheels, so that they may be used, with the motive power, either on or off the railroad. It is calculated that the engines will draw a gross load of 30 tons up a grade of 132 feet to the mile and around curves of 135 feet radius at a speed of four miles an hour. Portable bridges are sent with the other material, and it is intended to utilize the whole in some government works in England after the Ashantees shall have been properly chastised. Possibly thirty or forty miles may be constructed on the Gold Coast if the first section proves useful and the need of more is felt.

THE PENNSYLVANIA RAILROAD ARTICLE, which is to be submitted with the new constitution at an election now close at hand, has the character of much recent railroad legislation, especially the good feature of prohibiting special legislation, and the bad feature of forbidding higher rates for a given distance than for a greater distance including it. The injustice and bad economy, to both carrier and community, of this prohibition we have demonstrated so often that we fear that our readers get a little nauseated even at the mention of it. Consolidation of competing roads is prohibited, though of course ownership and management in one interest cannot be, so that the inability to consolidate may simply cause greater complication and expense. Transportation companies are forbidden to do other business, but other companies may work railroads not more than fifty miles long for carrying their own produce. Free passes are prohibited. The bad features of these regulations are of course made worse by being made part of a constitution which cannot be changed by legislation, and it is quite possible that what is called the prohibition of discrimination may cause a great deal of trouble.

THE RECEIPTS OF THE BELGIAN STATE RAILROADS have recently diminished materially, and are now reported to be, for the first time in their history, less than the expenses. It is naturally suggested by the officers in charge that the expenses now be brought within the receipts by cutting off all extensions of service which are not sure to bring in a return equal to their cost. Yet this is opposed, on the ground that the public welfare demands the extensions. Thus one of the dangers of State management appears. The part of the community which uses the railroads most demands eagerly the lowest possible rates; and when the rates, by chance, have been reduced below the paying point, they demand that the deficit shall be made up from the public treasury rather than by any increase in the prices they pay for transportation. This, of course, is equivalent to a demand that the whole tax-paying community shall pay part of the cost of transportation for that part of the community whose goods and persons are carried for less than cost.

ACCIDENTS ON THE BELGIAN STATE RAILROADS, according to the report for the year 1872, recently published, injured 88 persons not employees, 35 of whom were killed on the spot while three died of their wounds, while accidents occurred to 154 employees, 53 of whom were killed instantly while five died of their wounds. Thus we have a total of 96 killed and 146

wounded by accidents occurring on less than a thousand miles of railroad. These accidents, however, include injuries to trespassers and all others occurring on the roads, and not "train accidents" only, such as we report.

SOME RUSSIAN RAILROAD RECEIPTS are reported as follows for 1872 by a company which works several lines: On the Warsaw line, \$7,092 (gold) per mile; on the Nijni line, \$15,906; on the Nicholas line, \$27,325 per mile. The working expenses of the first were about 120 per cent., of the second 37½ per cent., and of the third 46 per cent. It is interesting to notice that, "in accordance with the decision of the general meeting of the shareholders, May 15, 1870, approved by the Government," the Warsaw line had to contribute \$23,540 and the Nijni line \$7,995 "towards the endowment of technical schools."

THE AMERICAN SOCIETY OF CIVIL ENGINEERS will hold a meeting on the evening of December 17, at eight o'clock, when a paper will be read entitled "Plan adopted for Raising a Draw span after the False-works were carried away," by C. S. Maurice, C. E., of New York.

General Railroad News.

ELECTIONS AND APPOINTMENTS.

—The third annual meeting of the Wilmington, Columbia & Augusta Railroad Company was held at Wilmington, N. C., November 19. Mr. R. R. Bridgers, Wilmington, N. C., was re-elected President, and the following directors were chosen: W. H. Graham, B. F. Newcomer, S. M. Shoemaker, W. T. Walters, Baltimore, Md.; J. D. Cameron, Harrisburg, Pa.; George S. Brown, New York; L. D. Childs, Columbia, S. C.

—At the thirty-eighth annual meeting of the Wilmington & Weldon Railroad Company, in Wilmington, N. C., November 19, R. R. Bridgers, of Wilmington, N. C., was re-elected President, and the old board of directors was also re-elected, as follows: A. J. De Rossett, Geo. Harris, W. A. Wright, Wilmington, N. C.; C. H. Brodgen, Goldsboro, N. C.; George Howard, Tarboro, N. C.; W. H. Willard, Raleigh, N. C.; B. F. Newcomer, S. M. Shoemaker, W. T. Walters, Baltimore, Md.; J. D. Cameron, Harrisburg, Pa.

—At the annual meeting of the Hamilton & Northwestern Railway Company in Hamilton, Ont., recently, directors were elected, as follows: P. W. Dayfoot, John Stuart, John Field, William Hendrie, Thomas Saunders, James Turner, Matthew Copp, John Proctor, and Anthony Leggat. Subsequently John Stuart was elected President; Anthony Copp, Vice-President; and Maitland Young, Secretary.

—The officers of the newly organized Salt Lake City & Bingham Railroad Company are as follows: President, C. W. Scofield; Vice-President, B. W. Morgan; Secretary and Treasurer, William B. Welles; directors, C. W. Scofield, B. W. Morgan, W. B. Welles, J. Colman, J. M. Haskell. The address of the company is Salt Lake City, Utah.

—Mr. Isaac D. Barton, late General Superintendent of the Atlantic & Great Western Railroad, is to be put in charge of the Flushing & North Side and the Long Island Central railroads January 1. Mr. Barton was formerly Superintendent of the Long Island Railroad, was made Superintendent of the United States Rolling Stock Company about two years ago, and on the removal of the then Superintendent of the Atlantic & Great Western was put in charge of that road, which position he continued to fill until the accession of Mr. Devereux as General Manager.

—At a meeting of the bondholders of the Union Pacific Railroad Company at the company's office in New York, December 3, to choose a trustee under the first mortgage in place of Oakes Ames, deceased, Oliver Ames, of North Easton, Mass., was elected by a majority of 35 over Levi P. Morton. Only about \$200,000 of the bonds were represented at the meeting.

—At the annual meeting of the South & North Alabama Railroad Company in Montgomery, Ala., Nov. 29, the following directors were chosen: W. J. Bibb, John W. Durr, H. E. Faber, Bolling Hall, Thomas Joseph, Josiah Morris, Montgomery, Ala.; Luke Pryor, J. W. Sloss, John T. Turner, Athens, Ala.; Charles Linn, James R. Powell, Birmingham, Ala.; Albert Fink, Thomas J. Martin, Louisville, Ky. The board elected the following officers: President, J. W. Sloss; Vice-President, Albert Fink; Secretary and Treasurer, H. M. Bush; Land Commissioner, John T. Milnor. Mr. Sloss takes the place of Mr. F. M. Gilmer, who declined re-election.

—The executive officers of the Cairo & Vincennes Railroad are now as follows: General Superintendent, L. W. Palmer; Assistant Superintendent, B. F. Burnside; General Freight and Ticket Agent, E. P. Wilson; Auditor and Cashier, J. P. Cartis. The Superintendent's office is at Cairo, Ill.

—The organization of the Phillips & Colby Construction Company, which operates the Wisconsin Central and Milwaukee & Northern railroads, is now as follows: President and General Manager, E. B. Phillips; Treasurer, Charles L. Colby, Boston, Mass.; General Superintendent, C. Harris; Auditor and General Ticket Agent, Henry Pratt; General Freight Agent, J. E. Follett; Cashier, Wm. Taintor. The general offices are at Milwaukee, Wis., having been removed thither from Chicago.

—At the annual meeting of the Pittsburgh, Washington & Baltimore Railroad Company in Baltimore, December 1, the old board of directors was re-elected, as follows: Mendes Cohen, William Keyser, John Donnell Smith, William H. Perkins, H. G. Vickery, Hugh Sisson, Charles Webb, Israel Cohen, Baltimore, Md.; George R. Dennis, Frederick, Md.; William S. Bissell, G. L. B. Fetterman, William Baldwin, Pittsburgh, Pa. The board re-elected the old officers, as follows: President, Mendes Cohen; Treasurer, Charles Donnelly; Secretary and Auditor, J. B. Washington; General Superintendent, E. K. Hyndman; Solicitor, George Eschiras, Jr.

—At a meeting of the board of directors of the Western Maryland Railroad Company in Baltimore, December 2, Mr. James L. McLane having declined a re-election to the presidency of the company, Mr. Alexander Riemann was chosen President pro tem.

—Mr. E. M. Moore, Assistant Superintendent of the Oswego Division of the Rome, Watertown & Ogdensburg Railroad, has been appointed Assistant Superintendent and General Freight Agent, in place of Mr. C. C. Case, who has resigned on account of ill health. Mr. E. A. Van Horne, late Superintendent of the Lake Ontario Shore Railroad, succeeds Mr. Moore as Assistant Superintendent. Mr. Moore's office is in Watertown, N. Y.

—Mr. J. C. Sharpless having resigned the position of Superintendent and Chief Engineer of the Painesville & Youngstown Railroad, Mr. W. C. Agnew will have charge of the Engineer's department, and Mr. G. R. Crane, heretofore Assistant Superintendent, will be Superintendent.

—Mr. George W. Ogilvie, heretofore General Freight Agent, will be hereafter Passenger and Freight Agent of the Des

Moines Valley Railroad, the two offices having been united. His office is at Keokuk, Ia.

—At the annual meeting of the James River & Kanawha Canal Company in Richmond, Va., November 29, Major Charles S. Carrington was re-elected President. Col. Henry C. Cabell and Charles W. Antrim, of Lexington, Va., were chosen directors on behalf of the stockholders. The Board of Public Works have appointed Franklin Stearns and S. C. Tardy, of Richmond, directors on behalf of the State of Virginia. The board of directors has chosen Robert J. Davis a director on behalf of the State, to fill a vacancy.

—The following appointments on the Hannibal & St. Joseph Railroad took effect December 1:

Mr. L. W. Towne is appointed General Superintendent, in place of O. S. Lyford, resigned. His office is at Hannibal, Mo. Mr. P. W. Drew is appointed Assistant Superintendent, with office at Hannibal, Mo. He will also perform the duties of Superintendent of Telegraph.

Mr. L. D. Tutill is appointed Division Superintendent, and will have charge of the St. Joseph & Denver City Railroad (leased by the Hannibal & St. Joseph), with office at St. Joseph, Mo.

Mr. H. L. Cooper is appointed Superintendent of Machinery, with headquarters at Hannibal, Mo.

Mr. J. F. Goddard is appointed General Freight Agent, in place of H. H. Courtright, who has gone to the St. Louis, Kansas City & Northern Railway.

Messrs. Towne and Drew have been connected with the road for several years. Mr. Towne as Assistant General Superintendent and Mr. Drew as Superintendent of Telegraph. Mr. Towne is one of the well-known Towne family, all of whom are prominent railroad men. Mr. Tutill has been Superintendent of the St. Joseph & Denver City road for some time. Mr. Cooper has been heretofore Master Mechanic of the Kansas City, St. Joseph & Council Bluffs, and Mr. Goddard Assistant General Freight Agent of the Chicago, Burlington & Quincy.

—At the annual meeting of the Atlantic & Great Western Railroad Company in New York, December 8, the following board of directors were elected: Lloyd Aspinwall, James H. Fay, A. Hegewisch, Abram S. Hewitt, James B. Hodgskin, Lawrence Wells, W. W. McFarland, W. H. Upson, New York; J. H. Devereux, Reuben Hitchcock, John Tod, Cleveland, O.; Henry E. Parsons, W. H. Upson, Ashtabula, O. Messrs. A. Hegewisch and W. H. Upson are new directors, replacing George B. McClellan and Edward Cooper. Mr. Hegewisch has been Assistant Secretary for some time.

—Mr. D. B. Bartlett has been chosen Secretary and Treasurer of the Lowell & Andover Railroad Company.

—At the annual meeting of the Chicago & Lake Huron Railroad Company at Port Huron, Mich., recently, the following directors were elected: Isaac Gale, Bennington, Mich.; William L. Bancroft, Edgar White, Port Huron, Mich.; Eliza Shepard, Charlotte, Mich.; Edward C. Nichols, Joseph M. Ward, Battle Creek, Mich.; W. Bailey Lang, William D. Gadsen, William Hamilton, New York.

OLD AND NEW ROADS.

Laclede & Fort Scott.

In the case of Huidekoper against Dallas County, Mo., the United States Circuit Court at Jefferson City, Mo., recently decided that the bonds issued to this company by the County of Dallas were valid, and that the county must pay interest and principal when due.

Texas & Mississippi Canal.

This company purposes connecting Galveston Bay with Sabine Lake by a ship canal. Two routes have been surveyed by United States Engineers, one by East Bay Bayou and Taylor's Bayou, and the second by way of East-Bay Bayou, Mud Bayou and the chain of small lakes to Sabine Pass. By the latter route the distance is about 50 miles, and no locks will be required, the country being very flat. The cost of a canal 50 feet wide and six feet deep, including the cutting of a channel through the reef in East Bay, is \$645,000. The county of Galveston has voted a subsidy of \$7,500 per mile to the company.

California & Texas Construction Company.

A report comes from Harrisburg, Pa., that an arrangement has been made between Col. Thomas A. Scott and Judge Asa Packer, President of the Lehigh Valley Railroad Company, by which the means necessary to continue work on the Texas & Pacific road will be supplied. It is also reported that under this arrangement Judge Packer, and other capitalists interested with him, will purchase a large interest in the Construction Company.

Railroad Taxation in New Jersey.

The Commissioners of Appeal of Jersey City, have summoned the Pennsylvania and the Delaware, Lackawanna & Western Railroad Companies to appear before them to show cause why the board should not assess them for municipal taxes, commencing Dec. 1, 1873, in accordance with an act adopted by the last Legislature, which provides that the railroad companies shall pay a municipal tax on their real estate of one per cent. on the valuation.

Missouri, Kansas & Texas.

The Kansas Supreme Court has decided that the issue of \$150,000 bonds by Bourbon County, Kan., in 1871, in aid of the Tebo & Neosho road (now part of the Missouri, Kansas & Texas) was void. The grounds are, first, that the order for the election does not name the road to which aid was to be voted, and second, that the vote was against the issue of the bonds.

The United States Circuit Court recently decided that the bonds issued in aid of the Tebo & Neosho road by Vernon County, Mo., were legal and valid, there having been no irregularity in the issue sufficient to make the bonds void.

Chesapeake & Ohio.

The first proposition to bondholders for funding the coupons has been modified as follows:

"1. The coupons to be surrendered and the assignments of registered interest shall be placed in the custody of some banking or trust company, acceptable to the majority in interest, to be held in escrow for five years from January 1, 1874.

"2. If, during that period, there shall occur a foreclosure of either of the mortgages on the road, then the coupons and interest assigned that are secured by that mortgage shall be entitled to the priorities established by the mortgage, after deducting whatever may have been paid as interest on the income bonds.

"3. Interest paid at any time on the income bonds shall cancel an equal amount of the coupons and assignments held in escrow."

These modifications are favorable to the bondholders.

Burlington, Cedar Rapids & Minnesota.

The proposition made to the bondholders is that payment of the coupons due November 1, 1873, May 1, and November 1, 1874, shall be extended to March 1, 1877. These coupons to be deposited with the Farmers' Loan & Trust Company of New York, and gold scrip payable March 1, 1871 and bearing 7 per cent. interest in gold, payable semi-annually, to be given for the coupons; interest to be adjusted. The coupons to remain with the trustee, upon the

condition that if the railroad company fails to pay interest and principal of the scrip at maturity, then the holders shall have their coupons returned to them with all their rights to proceed against the company.

National.

A meeting was held in Philadelphia last week, when a committee was appointed to make arrangements for a resumption of work on the line between New York and Philadelphia.

Colorado Central.

It is reported that a new track will be laid into Denver, Col., by this road, which now uses some two miles of Denver Pacific track.

Denver papers report that the company proposes to put on a line of freight teams from Longmont to Cheyenne and so carry freight in competition with the Denver Pacific between Denver and Cheyenne.

New York & Oswego Midland.

By order of the Receivers, the lease of the piers at the foot of Vesey street, North River, in New York, was sold at auction, December 8, for \$23,000. The annual rent is \$16,000, and the lease was for six years. These piers were used as a freight depot.

Maine Central.

It is stated that after January 1 there is to be a general reduction of expenses on this road, and the free passes are to be virtually abolished.

Much complaint is made by the Massachusetts towns along the line of the Boston & Maine of the refusal of the Maine Central to exchange freight or make connections with that road. Several of these towns do a considerable business with Maine, and the want of through connections causes much inconvenience.

Utica, Ithaca & Elmira.

It is reported that this company, which owns a road from Cortland, N. Y., southwest to Ithaca, has leased from the New York & Oswego Midland the section of its Auburn Branch from Freeville to Scipio Center, 26½ miles, and also that from Cortland to De Bryer, 19½ miles. The latter section would naturally form part of the main line of the Utica, Ithaca & Elmira, while the line from Freeville to Scipio Center could very well be worked as a branch.

Southern Pacific, of California.

The San Fernando Branch of the Los Angeles & San Pedro road is now completed, and an excursion passed over the line November 28. The branch is about 35 miles long, from Los Angeles northwest to San Fernando. Track is also laid on a branch of about seven miles from Florence south to Los Nietas. These lines will shortly be open for travel, when work will be commenced on the branch eastward to San Bernardino. By the contract with the county of Los Angeles, the company is bound to complete 70 miles of railroad in the county by March 1, 1874. Of this, 42 miles is already finished.

Classification of Illinois Railroads.

The board of railroad commissioners has completed the classification of the railroads of Illinois. This classification is made in accordance with the old railroad law and is based on the earnings reported to the board for the year ending June 30, 1873. The classification is as follows:

Class A: earnings over \$10,000 per mile: Chicago, Burlington & Quincy, Chicago, Rock Island & Pacific, Lake Shore & Michigan Southern, Pittsburgh, Fort Wayne & Chicago, Michigan Central.

Class B: earnings over \$8,000 and less than \$10,000 per mile: Chicago, Alton & St. Louis, Illinois Central, Illinois & St. Louis, Ohio & Mississippi, St. Louis, Alton & Terre Haute, Toledo, Wabash & Western.

Class C: earnings over \$4,000 and less than \$8,000 per mile: Chicago, Danville & Vincennes, Chicago & Northwestern, Columbus, Chicago & Indiana Central, Indianapolis, Bloomington & Western, Indianapolis & St. Louis, Terre Haute & Indianapolis, Toledo, Peoria & Warsaw and Western Union.

Class D: earnings less than \$4,000 per mile: Cairo & St. Louis, Cairo & Vincennes, Chester & Tamaroa, Cincinnati, Lafayette & Chicago, Grand Tower & Carbondale, Gilman, Clinton & Springfield, Hannibal & Naples, Lafayette, Bloomington & Mississippi, Paris & Decatur, Peoria, Pekin & Jacksonville, Pekin, Lincoln & Decatur, Peoria & Rock Island, Paris & Danville, Quincy, Alton & St. Louis, Rockford, Rock Island & St. Louis, St. Louis & Southeastern, Springfield & Illinois Southeastern and all other organized roads in the State, including those in process of construction.

Nashua, Acton & Boston.

But one passenger train a day is now run over this road each way, the travel having proved too light to support the number of trains heretofore run.

Des Moines Western.

The Des Moines (Ia.) Register of December 2 says: "That portion of the Des Moines Western Narrow-Gauge Railway, between Adel and Bedford, is to be sold at sheriff's sale at Adel to-day, to satisfy a mechanic's lien. The contractor claims to have done \$8,000 worth of work on that part of the road. Altogether some \$40,000 of work has been done on that line of the road."

Louisville & Nashville.

Through sleeping cars are now run from Louisville to Little Rock, Ark., by this road and the Memphis and Little Rock.

Cairo & Fulton.

The Secretary of the Interior has accepted the section from Little Rock, Ark., to Fulton, 126 miles, in accordance with the report of the Commissioners who inspected it.

Vermont & Canada.

A petition has been filed by the Central Vermont Company in the Vermont Supreme Court for an injunction to restrain the Vermont & Canada Company from proceeding in its suit against the Central Vermont in the Massachusetts courts. The hearing was set down for December 12, at St. Albans.

Lowell & Andover.

The location of the road has been completed and filed and work will shortly be commenced on the road, which is to extend from Lowell, Mass., east to Ballardville on the Boston & Maine.

The Massachusetts Supreme Court has dismissed the suit brought by William Peters to restrain the Boston & Maine Company from executing the lease of the Lowell & Andover road.

Vermont Central.

The trestle bridge north of Waterbury, Vt., which was carried away some weeks ago, is now fully repaired, and trains pass over it as usual.

European & North American.

It is reported that the proposed lease of the road to the Eastern & Maine Central companies will shortly be executed.

Richmond & Danville.

This company is about to issue \$1,500,000 in bonds in order to provide means to discharge its obligations and for general purposes. The bonds are to bear 6 per cent. interest, payable semi-annually, and having 30 years to run, and are to be secured by a general mortgage upon the whole property of the

company. The mortgage deed has been executed to Isaac H. Carrington and John C. Williams, trustees. By the last published report the funded debt amounted to \$2,021,090, besides the Virginia State loan of \$600,000. The capital stock is \$4,000,000. The company owns 195 miles of road, and leases the North Carolina Railroad, 223 miles, at an annual rental of \$260,000.

Kansas Central.

The Leavenworth (Kan.) Times states that this company has succeeded in making arrangements in Europe for the necessary funds to extend its road westward. The line is now 56 miles long, from Leavenworth to Holton, and it is intended ultimately to build to Denver, Col. It is of 3-foot gauge.

Connecticut Western.

This company owns a road from Hartford, Conn., west by north to Millerton, N. Y., 68½ miles. The road was opened for business over its whole length early in 1872. The present report covers the operations for 15 months, from July 1, 1872, to September 30, 1873, the fiscal year having been changed in accordance with the law which requires the annual reports to be made up to September 30 in each year. For the fifteen months the earnings and expenses were as follows:

Passengers.....	\$150,634.62
Freight.....	272,379.07
Milk.....	11,170.05
Mails.....	4,356.43
Express.....	4,215.18

Total earnings (\$6.440 per mile).....\$442,734.34
Operating expenses (65 per cent.).....287,905.94

Net earnings (\$2.252 per mile).....\$154,828.40
Surplus July 1, 1872.....46,614.32

Interest on bonds.....\$201,442.72
176,715.00

Balance.....\$24,727.72

The equipment of the road consists of 8 locomotives, 10 passenger, 2 passenger and baggage and two mail and baggage cars, 40 box, 127 flat and 20 four-wheel dump cars.

The road connects at Millerton with the Poughkeepsie & Eastern and Dutchess & Columbia roads, and the Rhinebeck & Connecticut, now nearly completed, will give it a connection with the great coal depot of the Delaware & Hudson Canal Company at Rondout.

The track and equipment are in good order, and it is believed that the expenses can be reduced during the coming year.

The capital stock is \$1,890,124.64, or \$27.493 per mile. The funded debt is \$2,674,000, or \$38.894 per mile, making the whole capital account \$4,564,124.64, or \$66.387 per mile. The annual interest on the debt is \$187,180, or \$2.737 per mile. The floating debt is a little less than \$17,000. The road was a very expensive one, requiring much heavy work, and for so new a line its report makes a very fair showing.

New Orleans, Mobile & Texas.

Proceedings having for their object the sale of the line west of the Mississippi have been commenced in the United States Circuit Court at New Orleans by Frank M. Ames, Trustee under the first mortgage as plaintiff, the New Orleans, Mobile & Texas, and New Orleans & Texas Railroad Companies and W. P. Kellogg being defendants.

The complaint states that in March, 1870, a first mortgage for \$12,500 per mile of road, from the Mississippi River westward to the Sabine River, and for \$25,000 per mile thence to Houston, was executed, with Oakes Ames and Edwin D. Morgan as trustees. On the 1st of January, 1872, a supplemental first mortgage, for \$2,825,000, or \$12,500 per mile, from New Orleans to Texas; for \$1,625,000, or \$25,000 per mile, from Brashear to Vermilionville, and for \$2,800,000, or \$25,000 per mile, from the Sabine to Houston, with the same trustees, was made to take the place of the first mortgage of 1870. The bonds under the 1870 mortgage were to be recalled and canceled, and the same were to be replaced by the \$7,250,000 of bonds issued under the mortgage of 1872. Mr. F. M. Ames is successor to the original trustees, and has taken possession of the road west of the Mississippi. The whole of the \$7,250,000 of bonds have been sold, and two coupons on them, due January 1 and July 1, 1873, are unpaid. Also \$4,125,000 of bonds issued or endorsed by the State, have been disposed of, or \$11,375,000 in all, on account of the building of this railroad to Houston, Texas, so far. It is also stated that the property taken by the trustee is insufficient to satisfy the debt.

In June last the property of the New Orleans, Mobile & Texas Company was sold under the second mortgage on the line from Mobile to New Orleans, and a new company, of the same name, was organized by the bondholders and received a conveyance of the property. Another company, called the Texas & New Orleans Railroad Company, was organized, which holds some five thousand of the old company's bonds.

The trustee does not claim any right to a further guarantee of bonds by the State of Louisiana, but he does claim a right to a further issue of \$750,000 of subsidy bonds, when he completes this railroad to Vermilionville, which, it is declared, requires but little more than "to purchase the iron and lay it upon the tracks." He adds that "the labor of doing this could be done before the termination of this suit," and asks for the sanction of the court to his doing it, though he has such right without this authority.

In the answer filed, the defendants, except Gov. Kellogg, admit all the claims made or stated, and the Governor's admission is also wanted. If granted, it is considered that this would release all the rights of the State against the old company; confirm the validity of all the bonds issued, and deprive the State of all claims against the road.

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Caledonia & Mississippi.

This company has been fully organized, and surveys of the line are to be made at once. The road is to extend from Caledonia, Minn., southeast 12 miles to Sumner, on the Chicago, Dubuque & Minnesota.

Salt Lake City & Bingham.

This company has been organized at Salt Lake City, Utah, and intends to build a railroad from Salt Lake to Sandy, a distance of about 13 miles. The Utah Southern road now connects the two points, but the new line is to be built on a line which will better accommodate the smelting works in the valley.

Stratford & Huron.

The county of Perth, Ontario, has granted a bonus of \$80,000 to this projected road.

Port Dover & Lake Huron.

This company has been granted a bonus of \$40,000 in aid of its road by the county of Perth, Ontario, and a bonus of \$25,000 by the town of Woodstock and a portion of East Oxford County.

Portland & Oxford Central.

This company having failed to file the bonds required by the court as security for its compliance with the order to put the road in good repair, an injunction restraining the running of trains was served on the company November 29.

North Carolina.

A bill is now pending before the North Carolina Legislature providing for a consolidation of the North Carolina, Western

North Carolina and Atlantic & North Carolina companies. The two latter companies are to be merged in the North Carolina, and that company is to have authority to issue bonds to the amount of \$13,000 per mile on the whole line and to issue stock to an amount equal to the cost of the road. The bill will probably have many amendments before it passes the Legislature.

St. Louis & St. Joseph.

A meeting of the bondholders is to be held shortly to take such action as may best secure their interests in the approaching sale of the road under foreclosure.

Atchison, Topeka & Santa Fe.

The Land Department makes the following report of land sales for the first seven months of the company's fiscal year 1873 and 1874:

MONTH, 1873.	No. acres.	Amount.	Average price.
April.....	6,144.62	\$34,120 11	\$5 55
May.....	8,512.82	43,435 97	5 10 1/2
June.....	8,278.61	43,368 08	5 24 1/2
July.....	9,638.88	60,561 67	6 28 1/2
August.....	12,547.78	72,619 98	5 79
September.....	19,163.96	94,467 38	4 92 1/2
October.....	23,676.66	129,867 05	5 10

In reporting these sales Mr. A. E. Touzalin, the Land Commissioner, writes: "The large monthly increases show plainly that our country is fast becoming understood and appreciated." The company has 2,000,000 acres in the market and a million not yet offered.

Milwaukee & St. Paul.

The La Crosse (Wis.) *Republican* of December 3 says: "The cars of the Chicago, Dubuque & Minnesota and the Southern Minnesota Railroad cross on the winter bridge of the St. Paul Railroad. Passenger trains on these two roads will start from and arrive at the depot of the St. Paul Company."

The St. Paul Press of December 4 says: "It is understood that a new arrangement will be made on the Milwaukee & St. Paul and West Wisconsin railroads, to commence next week, by which only one train on each road will be run per day. This new plan, however, will not interfere with travel or the mails, as the Milwaukee & St. Paul train will leave this city in the evening and the West Wisconsin in the morning. In coming out of Chicago, the Milwaukee & St. Paul train will leave in the morning and the West Wisconsin in the evening."

The Press also says that orders have been received to have 2,000 cars in readiness for the movement of wheat to the extent of 750,000 bushels. There is a general disposition on the part of farmers to market their crop in view of the increase of prices, and the present good condition of the roads in Minnesota, resulting from snow and hard frosts.

Portland & Ogdensburg.

Officers of this company have authorized the publication in the Portland papers of the statement that, while no contract has been signed with the Eastern Railroad Company, agreements have been made substantially the same as those published. The Eastern Railroad Company does not guarantee the Portland & Ogdensburg bonds, but guarantees the road 30 per cent. of the proceeds of the gross business passing over the Eastern from the Portland & Ogdensburg, and also the Portland & Ogdensburg's proportion of 30 per cent., according to the proportion of mileage that road bears to the whole mileage, with 10 per cent. additional as compensation for the heavy expense incurred by building the road through the Notch.

A preliminary agreement was first entered into between the roads forming the line from Montreal to Portland, whereby the commercial and business interests of Portland were protected. The agreement with the Eastern is only for business which would seek Boston by some channel, and, if this one was not opened, then by some other. The laws of New Hampshire authorize a connection for business of roads running together, and the object of the Eastern in making this guarantee is to assist in building the road.

Flint & Pere Marquette.

This company has issued a circular to its employees, stating that in consequence of the depression in the lumber trade, resulting in a large falling off in the freight traffic, the company will reduce expenses by a temporary suspension of construction work, and by a reduction of 15 per cent. in all salaries and wages exceeding \$1.50 per day.

Nashua & Rochester.

The track is laid from Rochester, N. H., southwest to Lee, about 15 miles, and cars have passed over that portion of the line. The grading of the whole line is nearly finished.

Springfield, Athol & Northeastern.

Regular trains commenced running over the extension to Springfield December 3, the first train having left Springfield for Athol on that day.

Boston & Albany.

A small temporary round-house is being put up near the site of the burned round-house in Springfield, Mass. The new bridge at Springfield is nearly completed, and is expected to be ready for use by December 25.

Peoria, Atlanta & Decatur.

The track is laid to a point about three miles northwest of MacKinaw, Ill., and about ten miles from the junction with the Toledo, Peoria & Warsaw. Work has been suspended for the present.

St. Paul & Pacific.

Mr. J. P. Farley, Receiver, having put in order 144 miles of the St. Vincent Extension, made application to the Governor of Minnesota recently for a certificate in the usual form. The attorney for the Northern Pacific Company raised some objections, but the Governor overruled them and ordered the certificate to be issued.

Northern Pacific.

The offices of the Land Department were removed from St. Paul to Brainerd, Minn., December 1.

Niagara Suspension Bridge.

The work of retimbering this bridge for the first time since it was opened for travel was completed November 29, having been commenced April 7. The work was necessarily slow, as it had to be done without interrupting travel. It required about 300,000 feet of seasoned lumber.

Kalamazoo, Lowell & Northern Michigan.

The preliminary surveys of this road are being pushed forward. A second line is now being run, but no part of the road has been finally located as yet.

Northern Pacific-Pacific Division.

The work of tracklaying on the extension from Tenino, W. T., to Tacoma, the Puget Sound terminus, which had been suspended for some weeks, was resumed November 25.

Gilman, Clinton & Springfield.

In the United States Circuit Court at Springfield, Ill., December 3, Judge Treat gave his decision, which was to the effect that the State court had complete jurisdiction of the case, and therefore that its order for the appointment of a Receiver must stand undisturbed by any injunction of the Federal court. The injunction against the Receiver, Mr. Hinckley, was recalled, and he has taken possession of the road. The trustees for the bondholders will, it is stated, begin new

proceedings to gain possession of the road under the mortgage. The necessary proceedings, however, will take some time, and meanwhile the road will remain under the control of the Receiver.

Western Maryland.

The formal opening of the road through to Williamsport, Md., will take place December 17. The ballasting of the extension from Hagerstown to Williamsport is nearly completed, and the road will be ready for travel by that time.

Freehold & Jamesburg.

This company gives notice that it will apply to the New Jersey Legislature at the next session for authority to sell the six miles of road from Jamesburg, N. J., to Monmouth Junction. This section was originally built as a cross cut, or connecting line between the Camden & Amboy and Trenton lines of the United Companies, and has always been used for that purpose.

East River Bridge.

Nearly all the men at work on the bridge over the East River between New York and Brooklyn have been discharged, and work is suspended for the winter. Active work will not be resumed till spring.

Norwich & Worcester.

It is announced that the steamboat trains from Boston over this road will hereafter run to Allyn's Point on the Thames River, seven miles below Norwich, and the boats of the steamboat line to New York will start from that point instead of New London. This change results from a difference between the New York and New England Company (lessees of the Norwich & Worcester road) and the New London Northern as to the contract for the use of the latter road between Norwich and New London. The boats of the Norwich line formerly ran to and from Allyn's Point, but for some years past they have run to New London, and the Norwich & Worcester trains have run to that point over the New London Northern track. Surveys have already been commenced for an extension of the Norwich & Worcester track from Allyn's Point down the east bank of the Thames River to Groton, opposite New London, where connection will be made with the boats and the Shore Line road. The distance from Allyn's Point to Groton is about six miles.

New York, Providence & Boston.

The second track has been completed from Stonington, Conn., east to Niantic, R. I., 10 miles, and is now in use. This leaves only 12 miles of single track on the line from Providence to Stonington, 50 miles.

Rhinebeck & Connecticut.

An injunction has been issued prohibiting this company from running trains over its road. The reason for the injunction is that the company has failed to put up the fences along the line as the work of tracklaying was completed.

Connecticut Central.

The town of Ellington, Conn., has voted to subscribe for 350 shares (\$35,000) of the stock of this company, on condition that a branch is built to Rockville.

International & Great Northern.

The shops at Palestine, Tex., are making steady progress. A round-house is going up at Longview, the junction with the Texas & Pacific. The bridge over the Brazos on the southwestern extension of the International is nearly completed. Considerable cotton is being sent from Dallas to Galveston by the Texas & Pacific and International & Great Northern.

New York & Canada.

Work has been suspended for the present on the line north of Port Henry, N. Y. There are still some 1,500 men at work between Port Henry and Whitehall.

Delaware & Hudson Canal Company.

It is stated that this company is negotiating for a site for a new depot in Albany to accommodate its leased lines, the Albany & Susquehanna and Rensselaer & Saratoga.

Chesapeake & Ohio.

The annual meeting of the stockholders was held in Richmond, Va., December 4. The annual report not being ready, the meeting adjourned until December 18.

The Church Hill Tunnel at Richmond is very nearly completed, and a locomotive with some freight cars passed through December 1. At that time there remained only the masonry of 67 feet of the eastern approach cut to be completed, and it was expected that the tunnel would be open for regular travel in a few days. The tunnel is 3,927 feet, or nearly three-quarters of a mile long, and is through earth, requiring to be arched for the whole distance. It is built for a double track, is 21 feet high and 26 feet 8 1/2 inches wide at the spring of the arch. The walls are of granite and the arch of brick, with a minimum thickness of 22 inches. The packing behind and above the arch is rough stone or brick laid in hydraulic cement. The work has been in progress for a long time, and has frequently been delayed by the caving in or settling of the earth.

The track through the tunnel is an extension of the road from its old terminus in Richmond to the wharves at Rockett's on the James River, where coal and other freights can be transferred to vessels directly. Its completion will be of great advantage to the road, especially in its coal business. A large part of the cost of the tunnel was paid by the City of Richmond.

Montclair.

Mr. J. H. Pratt has written a letter to the New York Tribune in which he gives the following statement of the cost of the road:

Land taken for right of way..... \$500,673 98
Construction, engineering, legal and general expenses..... 2,809,761 31

Total..... \$3,400,435 29
Deduct \$305,142.22 spent on Morristown Branch, and \$26,450.77 on Orange Branch..... 331,592 99

Cost of main line..... \$3,068,842 30

The first-mortgage bonds amount to \$1,800,000, and the second-mortgage bonds to \$780,000. The latter were not sold, but forfeited as collateral for loans. The floating debt, exclusive of that owing to the New York & Oswego Midland Company, he states at \$175,000.

According to this statement the actual cost of the road from the junction with the New Jersey Midland at West End to Montclair, 35 1/2 miles, has been \$86,446 per mile. A large amount is still needed to complete the road, as it is in very poor condition and has hardly any equipment, that now in use belonging to the New York & Oswego Midland Company. The money spent on the Morristown and Orange branches is lost for the present, and will require a large additional expenditure to make it productive. The annual interest charge on the bonds already issued is \$180,600, or \$5,087 per mile, and to earn enough to pay its interest the road must have gross earnings of over \$15,000 per mile—earnings which it is not likely to have for many years, if ever. From the road above Montclair the traffic is light and must continue to grow very slowly, while east of Montclair it meets with competition at every station, and can only gain business by giving facilities which it cannot now afford to give. The present prospects of the road are anything but bright.

The people of the town of Montclair, N. J., have raised a question as to the legality of the issue of \$100,000 town bonds

in aid of this road. The law requires the commissioners to sell the bonds of the town, and with the money so received invest in bonds of the Montclair Railway Company. It is now maintained that this was never done, but the bonds were passed over directly to the company in exchange for second-mortgage or income bonds of the company.

Georgetown & Frankford.

About two-thirds of the amount required to secure State aid has been raised for this road. The line will be about 15 miles long from Georgetown, Del., southeast to Frankford.

Milwaukee & St. Louis Air Line.

Engineers are now engaged in the survey of the section from Peru, Ill., north to the Wisconsin State line. The line from Richmond to Milwaukee will be run as soon as the surveys in Illinois are completed.

Syracuse Northern.

It is proposed to extend this road from its present terminus at Sandy Creek, N. Y., northward to Sackett's Harbor. This extension would be about 25 miles long and for most of the distance close to the Rome, Watertown & Ogdensburg road.

Utica & Black River.

Trains are now running regularly over the extension of the Carthage, Watertown & Sackett's Harbor line, from Watertown to Sackett's Harbor.

Ware River.

The stations on this newly-completed road, with the distances from the southern terminus at Palmer, Mass., are as follows: Thorndike, 3 1/2 miles; Ware, 11 1/4; Gilbertville, 15 1/4; Hardwick, 20 1/4; Barre Plains, 23 1/4; Coldbrook, 27; Williamsville, 33; Templeton, 39; Baldwinville, 42 1/4; Waterville, 47 1/4; Winchendon, 49 1/4. The company was originally organized in 1867, and the road was opened to Gilbertville in 1870. Considerable work had been done beyond this point, and the company then had a capital stock of \$1,000,000 and a bonded debt of \$750,000. Subsequently the company became practically bankrupt, and the road was sold under foreclosure and a new company organized by the bondholders, who were the purchasers. The capital stock of the company is now \$750,000, and it has a floating debt of over \$300,000, but no funded debt, the whole capital account being thus little more than \$21,000 per mile.

The question of the terminus at Winchendon is not settled yet, the Railroad Commissioners having refused to allow the track to cross the Cheshire Railroad at grade. The road is controlled by the Boston & Albany Company.

Philadelphia & Reading.

The coal train employees on the upper end of the road struck December 4, in consequence of a reduction of 10 per cent. in their wages. The coal traffic over this portion of the road was almost entirely suspended in consequence. The strike, however, was not general, the train crews on the Mill Creek, Mount Carbon, Schuylkill Valley, Schuylkill & Susquehanna and part of the Mine Hill branches still remaining at work. None of the passenger train men joined in the strike. The wages of the coal train men were raised last spring from \$1.85 to \$2 per day, and the present reduction brings them down to \$1.80. The men have offered to take the old rates of \$1.85 per day.

Carrying Butchers' Meat.

The Texas Refrigerator Company shipped ten car-loads of beef from Denison, Tex., November 28, in refrigerator cars built specially for this trade. The beef arrived in New York, December 6, by the Erie Railway. The weight of the shipment was 200,000 pounds, and it arrived in good condition. The company proposes to establish an extensive business of this kind, if its first experiments are successful.

Wisconsin Central.

This company having leased the Milwaukee & Northern road from December 1, the two roads will hereafter be operated as one line by the Phillips & Colby Construction Company, which has built the Wisconsin Central. The latter road is now completed to Worcester, Wis., 30 miles beyond the late terminus at Chelsea, and 172 miles from Menasha, so that the line operated is now 264 miles long, from Milwaukee to Worcester, with a branch of 26 miles from Hilbert to Green Bay. On the northern end the track is now laid to Penoque, 30 miles southward from Ashland, the Lake Superior terminus, making 320 miles of road in operation altogether. The gap between the northern and southern parts of the line is 55 miles, from Penoque to Worcester.

Cumberland & Ohio.

At a meeting of the directors held December 4, the President reported the work of grading steadily progressing, and the company justified in letting contracts for the grading and masonry of the section from Scottsville, Ky., to the Tennessee line, about 10 miles. This completes the letting of the 30 miles from Scottsville to Gallatin, Tenn. Work from Scottsville north to Shelbyville is well advanced. The board authorized the President to advertise for proposals for grading and masonry for six miles in Bowen County, and also for proposals for ties for a part of the northern end of the road. Three calls of 20 per cent. and one of 10 per cent. on the individual stockholders were ordered.

Baltimore, Pittsburgh & Chicago.

The work of track-laying is completed from the junction with the Lake Erie Division of the Baltimore & Ohio, at Centerton, O., west by north to Desher on the Dayton & Michigan. This completed section is about 60 miles long, and will be opened for travel about the middle of December. It is not intended to lay any iron west of Desher this fall, although much work has been done on the grading beyond that point.

Meetings.

The adjourned annual meeting of the Chesapeake & Ohio Railroad Company will be held in Richmond, Va., December 18.

The annual meeting of the Little Rock & Fort Smith Railroad Company will be held in Little Rock, Ark., December 15.

Dividends.

The West Jersey Railroad Company, lessee, paid a dividend of 3 per cent. on the stock of the Cape May & Millville Railroad Company, December 3.

The Syracuse, Binghamton & New York, leased by the Delaware, Lackawanna & Western, pays 3 per cent. December 20. Transfer books will be closed till the morning of the 22d.

Wheeling & Lake Erie.

The contract for the construction of this road from Wheeling, West Va., to Sandusky, O., 208 miles, has been let to Mr. Walter Shanly, one of the firm which has the Hoosac Tunnel contract. It is stated that work will be commenced in the spring, provided the company fulfills its part of the contract.

Rochester & State Line.

Track laying is progressing, the track having reached a point beyond Garbuttville. The road is being ballasted between Rochester and Scottsville. Iron and supplies are being received faster than the weather will permit them to be used.

Buffalo, New York & Philadelphia.

Two locomotives, with 17 by 24 cylinders and 5 feet drivers, and built by the Brooks Locomotive Works at Dunkirk, have been added to the equipment.

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